MEDICAL RECORD

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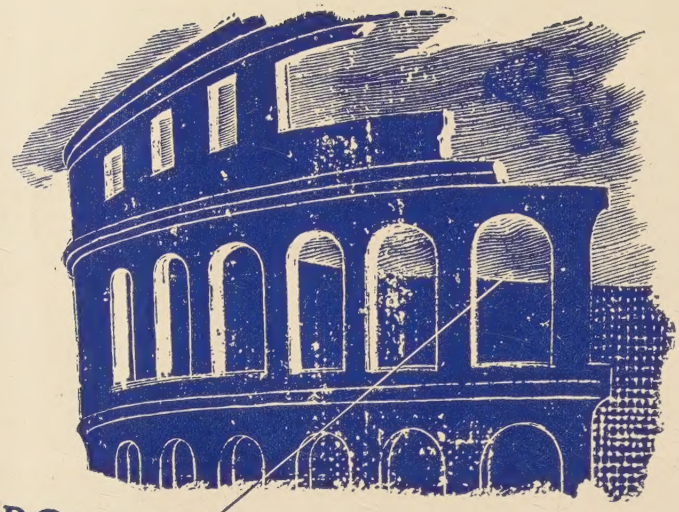
THE desire to take medicine is perhaps the greatest feature which distinguishes man from animals.

—*Sir William Osler*

MARCH 1947

Vol. 160, No. 3



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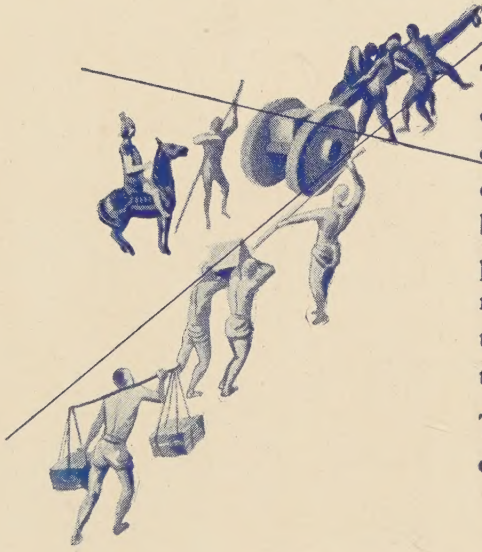

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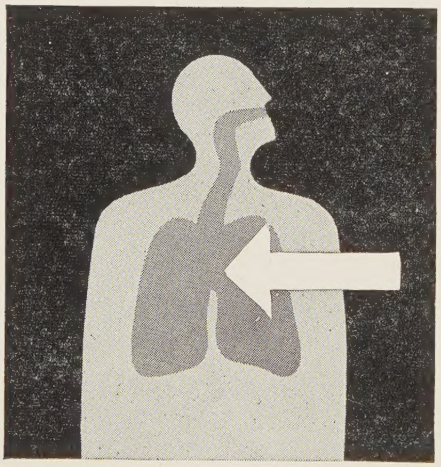

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MARCH, 1947

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VOL. 160, No. 3
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Entered as Second Class matter at the Post Office at Kutztown, Pa., under the Act of March 3, 1879. Office of Publication, 307 Main Street, Kutztown, Pa. Editorial and Executive Offices, 215 Fourth Avenue, New York 3, N.Y.

SINGLE COPIES.....FORTY CENTS
DOMESTIC YEARLY SUBSCRIPTIONS.....$4.00
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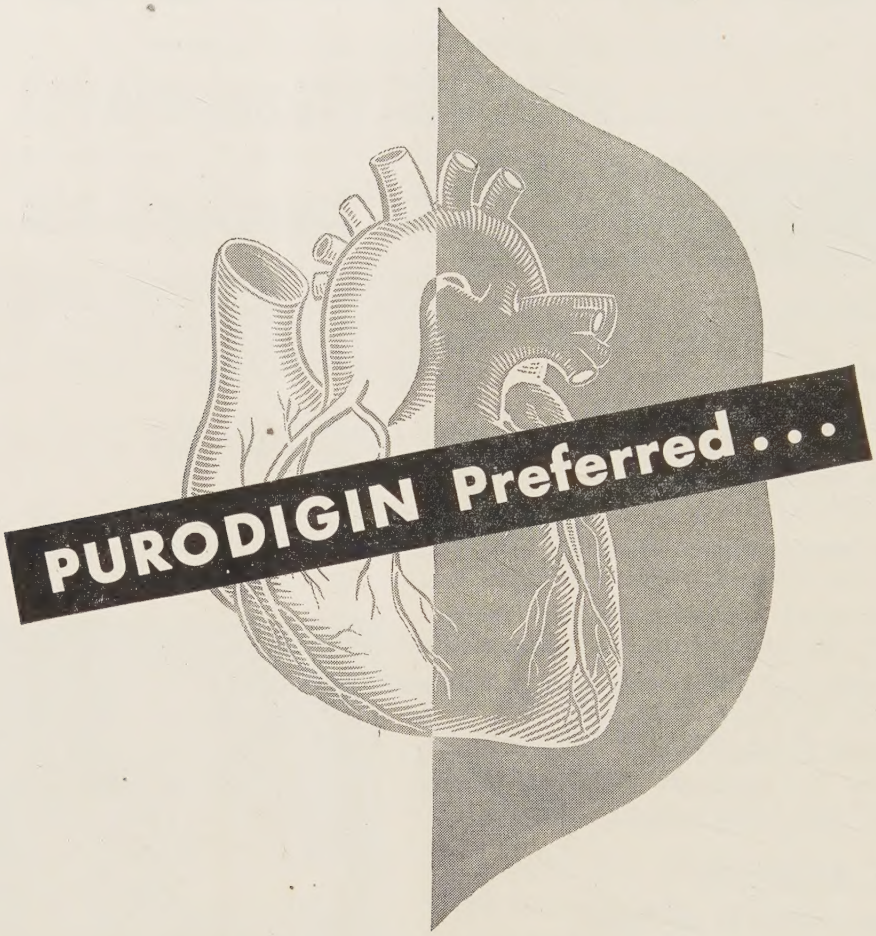

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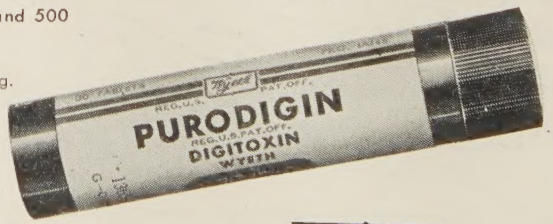

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Isolation of Nearly Pure Polio Virus

Successful isolation of what they believe to be a nearly pure polio virus has been accomplished by two scientists, Dr. Hubert S. Loring and Dr. C. E. Schwerdt, Stanford University, Calif.

Laboratory tests, including photographs taken through an electron microscope, indicate that the isolated virus is 80 percent pure or better, according to the two chemists. The experiments, carried on in the department of chemistry laboratories at Stanford, were financed by the National Foundation for Infantile Paralysis, from funds allocated to research on polio.

Production of the purified virus is seen as an important step in the long, and to date, unsuccessful laboratory struggle to produce a vaccine effective against poliomyelitis. Now that a virus which is relatively pure is available, the experimental door is open, Dr. Loring pointed out, to render the pure virus noninfectious by chemical or physical treatment, and the scientists hope, to produce a concentrated vaccine, free of the impurities which have plagued previous polio vaccine experimenters.

He cautioned against any conclusion that an isolation of the pure virus will necessarily lead to the production of a successful vaccine against polio, and stated that a long and exacting experimental path lies ahead of scientists seeking this vaccine.

First, with the virus produced from a single type of polio at Stanford—and there are many different polio strains—the two scientists will attempt to produce a vaccine effective for cotton rats, which happen to be susceptible to the type of polio known as the Lansing strain, on which Dr. Loring and Dr. Schwerdt have experimented since 1943. Next, similar vaccines must be prepared from other strains to which other experimental animals, such as mice, are susceptible. Later, the vaccines must be tried on monkeys, which are susceptible to most strains of polio, before the final stage can be reached when the vaccine can be tried on human beings.

Dr. Loring said that the tests indicated that this virus material has characteristics similar to other viruses which have been purified, and that it behaves both chemically and physically in a manner which would not be likely, scientifically, if more than one type of material were present.

According to the two scientists, one of the contributions to the knowledge of polio which has resulted from this work, is that scientists now know what the virus looks like, know how big it is and what its chemical characteristics and properties are.

The virus, seen by means of the electron microscope, is a relatively spherical particle which is so infinitesimal in size that its diameter is estimated at 25 millimicrons, or 25 billionths of a meter. Chemically, the virus reacts as a protein, which the two chemists believe it to be.

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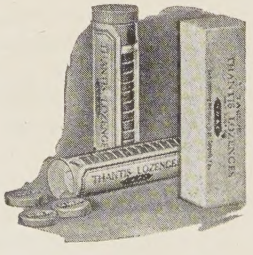

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Open Forum

Minerals in Nutrition

T. SWANN HARDING
Falls Church, Va.

Nutrition investigation moves so fast that almost constant reviews are necessary if we hope to keep informed. Minerals constitute a very small portion of the body by weight, but are tremendously important to its well-being. Due to the upcoming vitamins, minerals have not really had the consideration they should have had during the past decade; they have been pushed into a dark corner like the proteins. However, the use of isotopes is modernizing mineral investigations and again focusing attention upon this field. It will probably soon come into its own.

Fundamentally, the animal body *requires* seven mineral elements: calcium, magnesium, sodium, potassium, phosphorus, sulfur and chlorine, but it contains many others for reasons of its own, or perhaps, in the case of the female of the species, just for no reason at all. Calcium is present in larger amounts than any other mineral, about ninety-nine percent of it being involved in fabricating the bones and teeth and keeping them in order. The relations of calcium to phosphate, magnesium, acid excretion, hormones and vitamins is one of the most intricate problems in the nutrition field.

There are a few calcium ions found elsewhere than in the skeleton; these are important to the activity of the nerves, heart and muscles, to the clotting of blood and the maintenance of membrane permeability. Fortunately, calcium is unlikely to be deficient in the human diet, but as you are now aware, if there is a calcium deficiency, spinach will not help. Chemical balance studies of calcium, once the vogue, are now rather out of fashion because they are so easily affected by endocrine and various dietary factors, as well as by the period of time over which they are run. Incidentally, a cow is a particularly skittish experimental animal in this connection, and goes into a nervous tizzy at the slightest provocation.

A few other items might be of interest. Calcium is better absorbed when the human being is on a high-protein diet, while phytic acid greatly interferes with its absorption. The ingestion of low-cost breakfast cocoa in large quantities also results in reduced calcium retention in rats. The medium-priced cocoas, however, had no such effect; here, it's a matter of oxalate contents, the same as in spinach. Recommendations are for 0.8 grams of calcium daily for men and women, 1 to 1.4 grams for children and 1.5 to 2 grams daily, during the latter half of pregnancy and in lactation. However, there are so many variables, it is impossible to tell exactly how much of calcium, or of any other mineral, a particular human being needs. Hence, the optimum should be the ideal.

About eighty percent of the body's phosphorus is contained in the bones and teeth, and half the remainder is present in combination with proteins, lipids, carbohydrates and other organic compounds in the muscles. Phosphorus compounds play an important rôle in fat and carbohydrate metabolism, and also in the complex chain of events occuring in muscle contraction and thereby, energy transfer. It was shown long ago, that the growth of young rats could be reduced by restricting their phosphorus intake; but the calcium-phosphorus ratio in the diet is also of paramount importance. When either is fed in excess, the other is simply excreted, over and above a certain minimum. The optimum ratio appears to be 1:1, but there must also be adequate vitamin D, if skeletal tissue and teeth are to be formed and normally maintained. Recent research with radioactive phosphorus indicates that this mineral can be readily absorbed in resistant rickets which lack associated renal disease. This contradicts previous concepts about the malfunction occurring in resistant rickets. In the diets of children and of women during the latter part of pregnancy and lactation, dietary phosphorus allowances should equal those for calcium. Other adults should probably take about 1.5 times as much phosphorus as calcium.

Three-fourths of the body's magnesium is in combination with calcium and phosphorus in complex bone salts; the remainder is present in soft tissues and body fluids. Little is known of magnesium's physiological rôle, but it is important as a catalyst for numerous enzymatic reactions. It can, under stress conditions, replace calcium in the bone to a small extent, yet excess magnesium inhibits the calcification process. A magnesium deficiency has been produced in experimental animals, and various cardiac and circulatory changes resulted which were followed by tetany. One case of tetany in a child was reported, as probably due to a magnesium deficiency. It was relieved by an oral administration of magnesium sulfate. Little is known of the human magnesium requirements, but interesting relationships have been described between this mineral and the parathyroid glands, dysfunction of the thyroids and renal insufficiency.

Sodium forms the largest fraction of the total base in blood plasma and the extracellular fluids. It occurs in the body, largely associated with chloride and bicarbonate ions; with them it functions to maintain osmotic pressure and ionic equilibrium of the body fluids and tissues. Sodium salts have been experimentally used in treating shock in animals. The human requirement of sodium is small and unlikely to be missed, for the amount of salt consumed per-capita in the United States, daily, contains about 4 grams of sodium.

Potassium is the principal cell cation; here it functions in conjunction with phosphate, chloride and bicarbonate. The potassium content of the red blood corpuscles is more than thirty times that of the blood serum. Rats maintained on a low-potassium diet, which was otherwise adequate, showed necrosis of the myocardial fibers and renal tubular epithelium; the addition of potassium to the diet

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prevented these changes. A potassium deficiency has also been demonstrated in dogs. The requirement for man is unknown, but as all natural foods are good sources of potassium, it can probably be ignored.

Chlorine comprises about 0.1 percent of the body, the cerebrospinal fluid containing the highest chloride concentration, followed by the interstitial fluids, the lymph, the serous transudates, the exudates and the gastrointestinal secretions. The human diet contains sufficient chloride, except during excessive loss via diarrhea, sweating, or because of endocrine or metabolic disturbances.

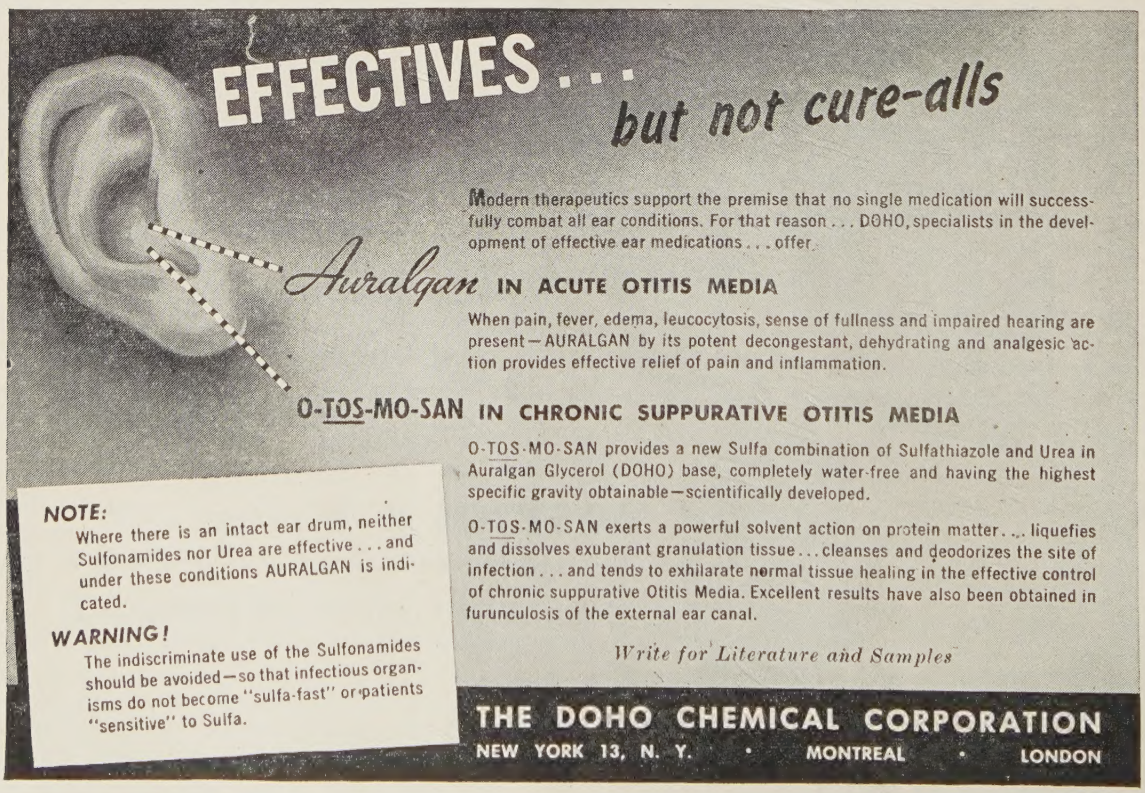
All the cells of the body contain sulfur. It is mainly located in the amino acids, cystine, cystiene, methionine and ergothionine, comprising certain proteins. Only small amounts of inorganic sulfur occur in the blood and tissues, but the mineral is a constituent of the sulfatides, glutathione, insulin, biotin and thiamine. Methionine is an essential amino acid which cannot be replaced by cystine. Hens store sulfur to make egg yolk during their periods of low production, but lose it when they go into high production.

Iron is a very essential body mineral, of course, and performs many complex and essential physiological functions. Whenever there is an increased demand for hemoglobin formation, we need more iron. However, the healthy, male adult and the healthy woman after menopause have very low, if not negligible, iron requirements. The chief function of iron is that of the transportation of oxygen through the blood via the hemoglobin, but it also aids in buffering the blood and also in other processes. Oddly enough, despite all the experimentation to date, the precise metabolism of iron in the human body remains only partially understood.

Iron is not excreted in appreciable quantities by the kidneys or the intestinal tract. The human body absorbs ferrous iron more readily than ferric, and phytic acid possibly lowers the iron absorption. Thus, we may actually absorb less iron from whole wheat than from white flour; for the former has a phytic acid content, as well as more iron than the flour. Adolescent children and pregnant and lactating women need about 15 milligrams of iron daily; other adults probably require 12. It is difficult to miss that in the normal varied diet.

Iodine performs an important function in the colloids of the alveoli comprising the thyroid gland. It is stored in the amino acids, diiodotyrosine and thyroxine; but its only known physiological function is its occurrence in the latter, which as secreted by the thyroid, controls the body's energy metabolism in some, as yet, mysterious way. The human requirement for iodine is from 2 to 4 micrograms daily, per kilogram of body weight.

Copper is an important element that is absent from whole milk and, along with a deficiency of iron, helps to produce a nutritional anemia if one is on such a diet. Hemoglobin regeneration apparently will not occur unless copper is available, although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copper is not a constituent of the hemoglobin molecule, and its functions in the body are not as yet understood. A copper deficiency has also been observed in cattle which have grazed on pastures demonstrably low in that element. The human requirement has been studied, but since the body does not readily excrete copper, it is difficult to evaluate. Whatever the daily allowance—and 2 to 2.5 milligrams has been suggested for young women—it is readily available in the diet.

Cobalt is essential to animal nutrition, minute quantities being adequate enough to relieve the progressive emaciation and anemia which occur naturally in sheep and cattle of certain regions. In some cases, it is essential for blood regeneration in anemias, but our requirements are unknown and probably easily met. Some favorable results with cobalt in treating anemia in children have been reported.

While the following minerals occur in the body, little is known about the human requirements for them, or their exact functions; Manganese, zinc, fluorine, boron, aluminum and venadium. Manganese-deficiency symptoms have been demonstrated in chickens but not in man. Rats grow more slowly on zinc-deficient diets. There is a lower incidence of dental caries among children when the fluorine content of the drinking water is 1 p.p.m., or greater. Borón is essential to certain plants, and occurs in animal tissues, while aluminum is widely distributed in both plants and animals. Venadium is not believed to be an essential element.

Many other elements occur in traces in plants and animals, and offer a wide and difficult field of investigation to the ambitious worker. However, the possibility that a deficiency of any one, or more of these may occur in man seems remote, for their distribution in nature is wide and man's requirements, if any, are minute.

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[1] Rose, E.: M. Clin. North A. 26:1711, 1942

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Aural Rehabilitation Center

Major General Norman T. Kirk, the Surgeon General, in dedicating the Walter Reed General Hospital Aural Rehabilitation Center at Forest Glen, Md., on January 19th, said that the hard-of-hearing will receive care "of the most modern kind known to science."

"The construction of this center," General Kirk said, "with its facilities and the personnel who have been ordered here to operate it, represents the accumulative knowledge of the advances that have been made during this war in the care of the hard-of-hearing. The testing and training equipment has been expertly developed and constructed by acoustical engineers. Much of the equipment which is being used, has been designed with the help of the National Research Council in cooperation with the Central Institute for the Deaf in St. Louis, and the Psychoacoustic Institute at Harvard. Some of the other equipment was developed by the personnel who served in the army in these three aural rehabilitation centers during the war period. Talents and skills of a wide variety have contributed to this team. The staff assembled for the present work at Forest Glen includes otologists, psychoacoustic specialists and technicians, lip-reading and speech-correction instructors and electronic engineers, as well as occupational therapists and other personnel that go to make up a hospital."

The army program for the treatment of the hard-of-hearing, which was carried on during the war period, was first initiated in July 1943 at Walter Reed General Hospital. It was soon found that there were too many specialties centered in this institution, and in November of that year this center, with its personnel, was moved to Deshon General Hospital, Butler, Pa. Two other aural rehabilitation centers were later established, one at Borden General Hospital, Chickasha, Okla., and the other at Hoff General Hospital, Santa Barbara, Calif. The navy, likewise, established aural rehabilitation centers in some of their general hospitals. Undoubtedly, greater developments were made during the war years, as a result of the armed forces aural rehabilitation program for the mass care of the hard-of-hearing, than were ever made before. Some eighty-four hundred patients have received special treatment for impaired hearing in these three army aural rehabilitation centers.

With the decrease in the patient load, the medical department has closed fifty-four general and twelve convalescent hospitals. When these were closed, the three aural rehabilitation centers were wiped out. The army is at present operating one convalescent and fourteen general hospitals. For these reasons, the aural rehabilitation center was again established at Walter Reed. This is where the army will now give care to the hard-of-hearing, both for army personnel and for veterans administration beneficiaries.

Through The Menstrual Years of Life-

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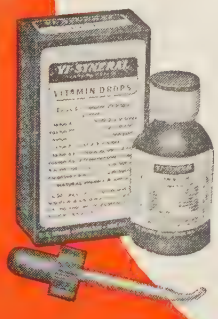

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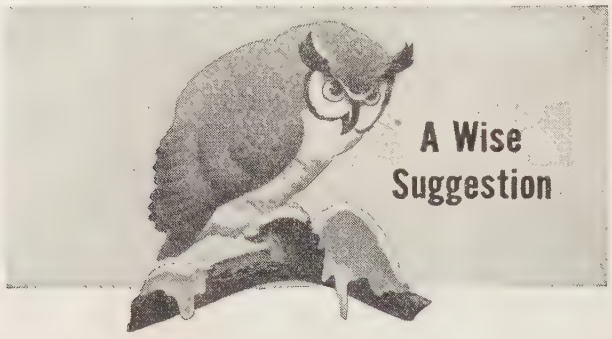

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Planned Parenthood Federation

Dr. Alan F. Guttmacher, associate professor of obstetrics and gynecology, Johns Hopkins Medical School, Baltimore, Md., revealed that an overwhelming majority of American physicians approve of birth control for economic and social reasons, as well as to safeguard health.

Dr. Guttmacher made this announcement as the first nationwide campaign of the Planned Parenthood Federation of America opened at the Hotel Plaza, New York, N. Y.

The federation and its affiliated organizations are seeking $2,000,000 for an expanded four-point program of child spacing services, treatment for infertility, education for marriage and parenthood, and research.

Dr. Guttmacher spent many months in making his survey of medical opinion on the subject of contraception. He polled 15,000 physicians all over the country, and as a result of detailed answers to his questionnaire, he was able to present for the first time a documented analysis of how and why most doctors favor birth control.

Dr. Guttmacher found that economic reasons for child spacing were more highly favored than most health reasons. He found that 97.8 percent of the physicians polled, approved birth control measures for health reasons; 86 percent approved control for pregnancy spacing, and 79.4 percent approved conception control for economic reasons. Marital adjustment was considered an indication for contraception by 72 percent of the physicians polled. According to Dr. Guttmacher's report, the West represented the most liberal medical opinion toward contraception, the South next, with the Central area in third position and the Northeast least approving.

Dr. Guttmacher cited education and research as the two most important planned parenthood objectives to be attained by the campaign. He cited four positive aspects of the program. "We must teach the public the advantage of having children while still young. We must educate the right type of parents in the advantages of large families. We must inform the childless that their plight is not hopeless and place at their disposal in every community the best facilities that modern medicine has to offer. The ideal contraceptive method has not yet been found and furthermore, today its discovery seems far off. Such a goal is what our research must strive for." Citing research in infertility as an urgent need, Dr. Guttmacher said, "The sores and scars of infertility are internal, and therefore less obvious, and do not result in death of the body, simply agony to the soul."

Charles E. Saltzman, chairman of the New York City Planned Parenthood Campaign, presided at the dinner, and the Reverend Cornelius S. Trowbridge, chairman of the board of the Planned Parenthood Federation of America presented the 1947 Albert and Mary Lasker Awards to Dr. Guttmacher and Dr. Abraham Stone, editor of the *Journal of Human Fertility* and vice-president of the Planned Parenthood Federation.

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Real "Shell Shock" Cases

Real "shell shock", a relatively rare condition, has been found by army medical officers. In World War I, practically every neuropsychiatric case resulting from combat was labelled "shell shock", until it was discovered that many such cases had never been within miles of an exploding shell.

The majority of combat breakdowns in World War II were labelled "combat fatigue" and special centers were set up in back of the front in order to deal with these men. Naturally all the causes which bring about nervous and mental conditions among men anywhere, also operated in the army. It proved extremely difficult to isolate any brain syndrome due to blast waves alone. Usually, where they were suspected, the indications were that the blast waves had served only to exaggerate and bring to the fore previously existing pathological conditions. Now, the existence of a limited number of cases of pure shell shock, called "closed head injury syndrome due to blast", is established by an intensive study reported in the *Bulletin*, the official Medical Corps publication of the U. S. Army.

Thirty-four cases were studied, in which no other cause for the pathological condition could be found. The men were studied from fifty days to a year after being subjected to the blast waves. The main complaints of the blast group were headache, ringing in the ears, deafness and anxiety. Other symptoms included dizziness, (not true vertigo), daze and confusion, sudden attacks in which everything went black, weakness, fatigue, chest pains and backache. Apathy, mental lethargy and many physical complaints were also reported. When they were seen two to twelve months after the injury, the syndrome complex was little changed. The ringing in the ears had disappeared in some cases and the deafness had improved considerably. Backaches, dizziness and blackouts still were mentioned frequently. When questioned, none of the men would acknowledge retention of even seventy-five percent of normal energy. A third indicated poor memory for recent events, but in none was memory loss a disability. Moderate depression was noted in several.

"In the total synthesis, a more concrete concept of the syndrome emerges" the report said. "The men had been stunned and often rendered unconscious by a nearby blast. Two-thirds of the group had been unconscious. A third showed ruptured ear drums. Anxiety tension or dullness and apathy were present in sixty-five percent. Headaches were heterogeneous in character. They were usually described as a 'dull ache' or sharp jabs of pain in the scalp. About twenty percent showed minor but definite neurological changes." Whether there is a definite alteration in the brain has been impossible to determine, the report stated. The indications are, however, that this is true. Even so, the study explains, it need not cause any permanent mental, or nervous disability and on the whole the prognosis for shell shock is good.

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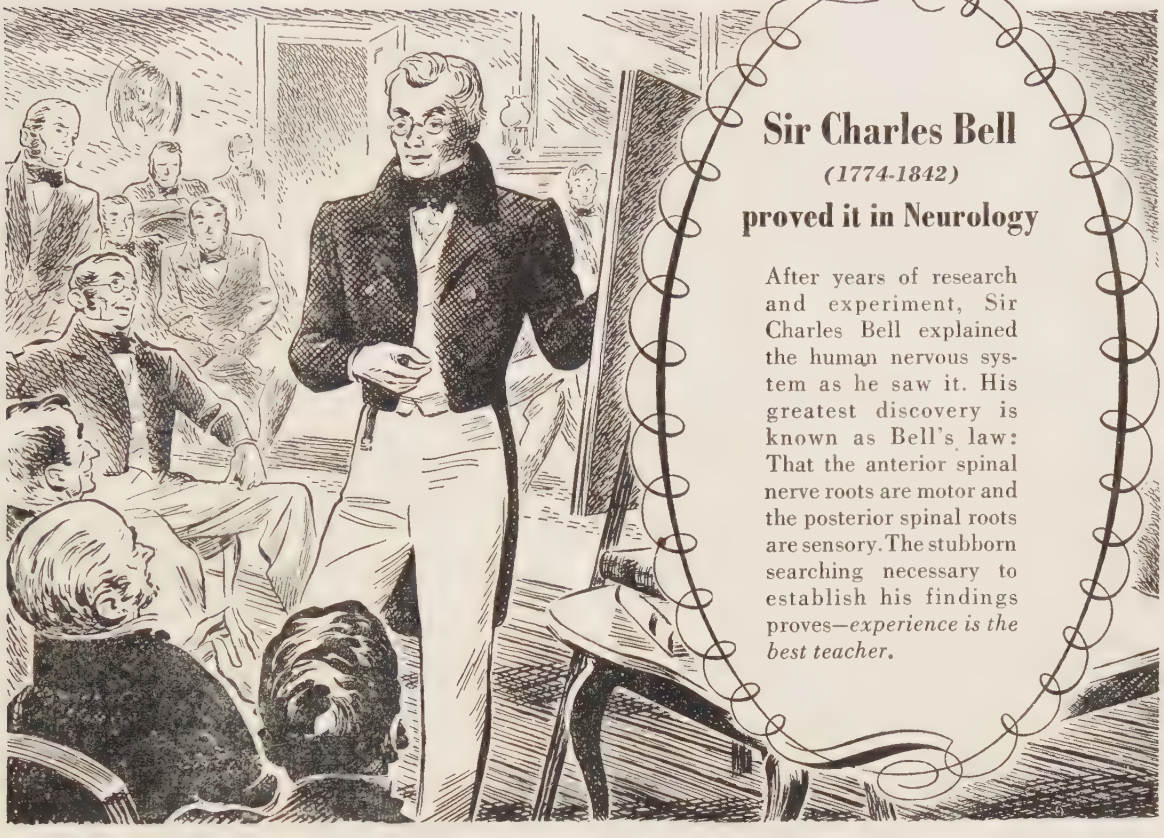

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After years of research and experiment, Sir Charles Bell explained the human nervous system as he saw it. His greatest discovery is known as Bell's law: That the anterior spinal nerve roots are motor and the posterior spinal roots are sensory. The stubborn searching necessary to establish his findings proves—*experience is the best teacher.*

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Critique

Formation of life patterns This article, which appeared in volume 11 of *Mental Hygiene*, by Dr. Leslie B. Hohman, deserves rereading even now.

Susceptibility to cancer During 1929 Dr. William J. Mayo developed his idea that "one factor of supreme importance which has not been sufficiently stressed is that individuals vary in their susceptibility to the cause or causes of cancer, whatever they may be. In no other way can we explain why ninety percent of the people do not have a cancerous disease, and why ten percent of them die from it."

Vitamin C in sulfured fruits Agnes Fay Morgan and Anna Field reported in the June, 1929 issue of the *Journal of Biological Chemistry*, that sulfured peach products retained their full complement of antiscorbutic vitamins, but that unsulfured, sun-dried or dehydrated peaches, retained no detectable vitamin C. Sulfured dried peaches were found to rank with orange juice and raw tomatoes as a source of vitamin C, yet many have long contended that sulfurous acid had deleterious effects on dried fruit, so the findings were a bit of a surprise.

The groaning board These days it isn't the groaning board that keeps people healthy, but the ability to select the right foods, possibly in much lesser quantity and variety than those of our ancestors. The more dishes served at a meal the more time is spent afterward in cleaning up, the more also in preparation. Simple meals save time and, if composed of the right foods, can be as nutritious as complex meals and possibly a great deal more digestible. Meals that include just a few appetizing dishes in generous quantity, properly balanced from a nutritional standpoint, are the things to recommend in these modern times.

Rheumatism cures On June 12, 1929, the Food and Drug Administration announced that it had taken action against two hundred and forty-five socalled cures for rheumatism, and that these led the list of the frauds it had recently chased. Laymen charge up many aches and pains to rheumatism, some of which may need specific treatment, or may represent local infections — venereal disease, tuberculosis, focal infections etc. Gout and arthritis deformans are often classed as rheumatism by laymen, but really are not. A layman may cure himself of his "rheumatism" by treating his fallen arches. No one treatment could possibly remedy all these aches and pains. "Cures" were often made from ineffective plant extractives, red pepper, turpentine, useless mineral salts and so on.

Irradiated milk Archie, a character in a radio program called Duffy's Tavern, at one time seemed to be confused as to whether the child who had "pickets" was ill with a disease or with labor trouble. The May 18, 1929 issue of the *British Medical Journal*, reported on a demonstration of the value of irradiated milk in the treatment of rickets, at the Royal Infirmary in Edinburgh. The demonstration was convincingly successful.

Forthcoming book Oddly enough no book has ever been written which gives a history of the U. S. Department of Agriculture, purely as the great scientific institution which it has become since its creation in 1862, when President Lincoln signed the organic act founding it. This gap will be filled soon when there comes from the press of the University of Oklahoma a book, entitled *Two Blades of Grass*, wherein the attempt will be made to cite the most important research achievements of the department, many of them in the field of human, as well as of veterinary medicine, and to give some facts about the scientists who made the accomplishments. The book is by Mr. T. Swann Harding who began his career as a research chemist in the department in 1910, and later became the editor of its scientific publications and then a special writer. The book will have a foreword by Secretary of Agriculture Anderson and will be fully illustrated.

Food We have talked a lot about scarce food in recent months, yet in 1945, Americans had more eggs, dairy products, citrus fruits and vegetables per person than ever before, while the per capita supply of meat was the greatest since 1909 — except for the old peak year of 1911. Americans consumed ten to fifteen percent more food, per person, during World War II than they did during World War I. An agricultural technological revolution has made it possible for farmers to produce more food than ever before in our history. During the recent war, we also had more meats, sugar, fats, coffee, eggs, dairy products, vegetables, fruits, calcium, iron, vitamin A, vitamin C, riboflavin and niacin than we had during World War I. Incidentally, the turkey contains a great amount of thiamine; portions just under the skin are richer in this vitamin than those nearer the bone. During roasting, the dark meat loses slightly more than half its thiamine and the white meat more than a third. Reheating the turkey does not result in any further marked destruction. Kale is such an excellent source of vitamin A that its carotene is used to better advantage, biologically, than the carotene from carrots themselves, but it should be cooked lightly, only sufficiently to make the leaves tender. It can also be lightly fried in melted fat in a covered pan, the leaves steaming till just tender.

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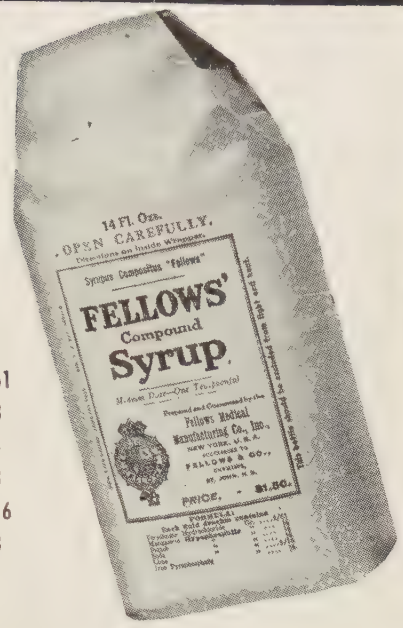

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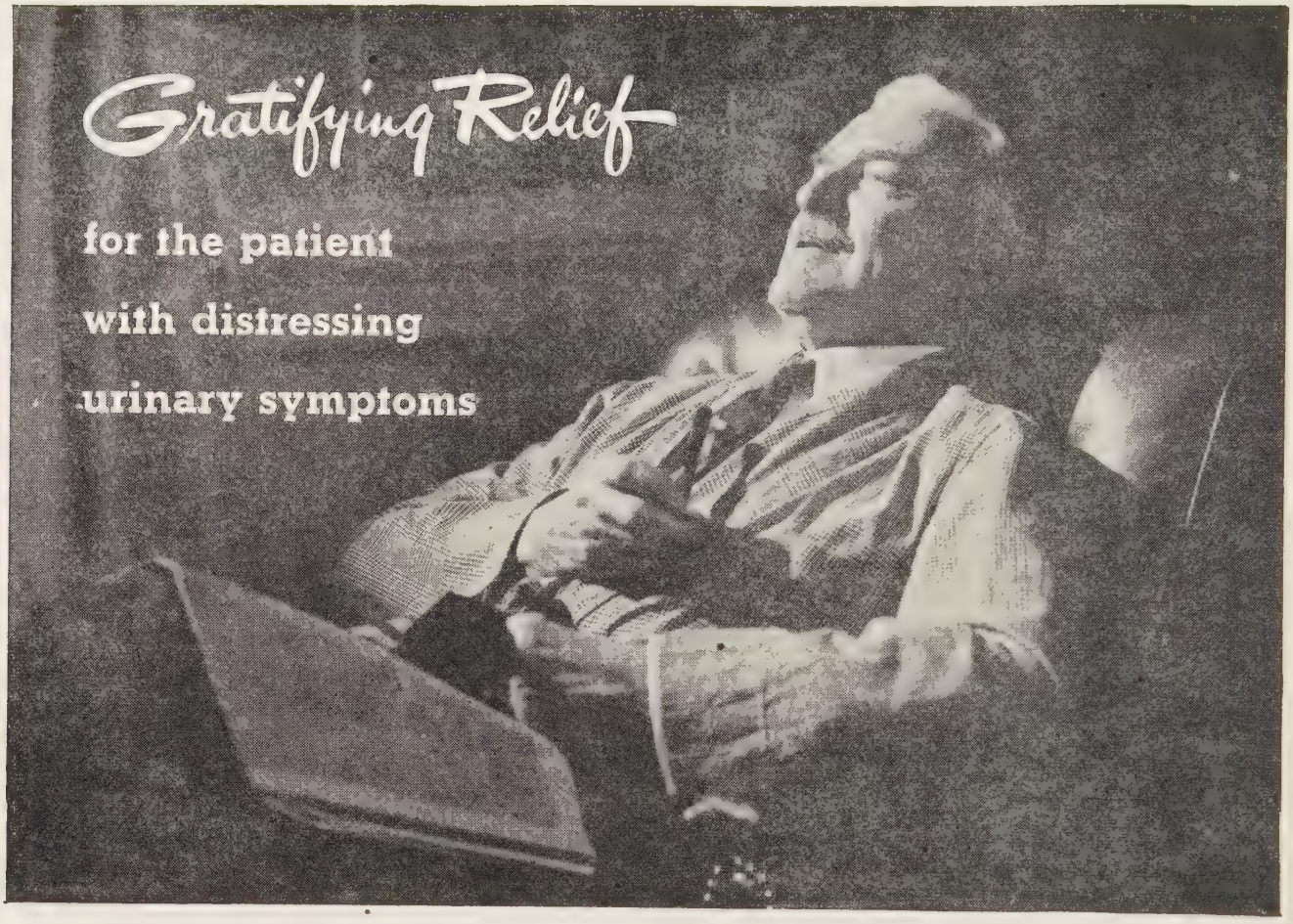

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PUBLISHED MONTHLY BY

THE MEDICAL JOURNAL AND RECORD PUBLISHING CO., INC.

VOL. 160, No. 3 MARCH, 1947 WHOLE No. 2770

"PROGRESS" DURING PSYCHOANALYTICAL TREATMENT

EDMUND BERGLER, M.D.

New York, N.Y.

"I don't see any progress", is the most typical objection of patients and their relatives, (especially of those who pay for treatment) which is uttered during the course of analytical treatment. The layman's idea of progress during analysis is based on a direct proportion of checks and time consumed; after three months the progress should be greater than after two months, and so on, in direct arithmetical and even geometrical progression. In other words, a direct increase of progress at an ever increasing pace is expected and asked for. We know that nothing of that kind happens in psychoanalysis; after six months the patient might feel subjectively worse than he did at the very beginning of the treatment. The simple reason being, that after all that time, the patient may perhaps begin to understand, *affectively,* what he has to give up; the most cherished wishes and resultant defenses of his unconscious. At this point, we are once more confronted with the outcry: "I don't see any progress."

How can we avoid these misunderstandings? The answer is simple; we cannot. We can try to explain in a preventive manner, at the beginning of the treatment, how analysis typically works. As long as the underlying unconscious wishes and defense mechanisms are not destroyed, modified or changed, the neurosis will manifest itself in symptoms, signs, ego limitations and depressions. Furthermore, we can ask the naive patient every time he complains about lack of progress, "Do you use the word progress in the layman's meaning, or in the analytical connotation?" Thus, with never ending patience, we have to make the patient understand that, analytically, progress during the first phases of the treatment does not mean the immediate disappearance of the symptoms, but understanding. That understanding is first intellectual and after much time is spent in repetition in the transference and after a long "working through" of the resistance, an affective one. The result is the typical discussion in the first months of the analysis: "Do you deny that you now understand your problem better than you did before?" asks the analyst. "I did not come to you to become a professor of psychology, I came only to be cured", answers the indignant patient.

Our problem starts with three questionmarks:

1. Is our general opinion correct, that for quite some time we have no reason to expect therapeutic changes during analysis?
2. What about cases where the symptoms disappear without recurrence but without an analytical destruction of the underlying reasons?
3. What is the typical sequence of events? Do the symptoms disappear first, and then the personality changes, or *vice versa?*

Therapeutic Changes in the First Phases of Psychoanalysis

Let us start with the first question. It is analytically obvious that without changing the basic structure of a neurosis, no basic change in the patient can occur; but, and that but weighs heavily, during analysis the feeling of guilt is mobilized and results in an increased pressure against the specific defense mechanism used by the patient. Consequently, very often, the changes of the defense mechanism, in the first weeks of treatment, are quite striking and give the patient and the environment the mirage of normalcy. Some typical examples follow:

CASE I.—Mr. A., a schizoid, aged thirty-six, entered analysis because of an unsolved transference by his former analyst, who, in another country, had treated him ten years ago. After being brought to understand his inner passivity as the basis and his paranoic projections as the defense, the man rapidly changed in one respect; he became a good businessman, whereas previously he just, to quote him, "trotted along". This change, the mobilization of a stronger defense mechanism under the pressure of guilt, analytically activated his defense and gave him the mirage of a "cure."

CASE II.—Mr. B., aged forty-two, was, to an amazing degree, under the thumb of his aggressive wife. Asked, *f.i.,* what the conflicts with his wife consisted of, he answered angrily that "his allowance was too small". He and his wife had the strange arrangement that he delivered all the money he earned in a free profession, about twenty thousand dollars a year, to his wife (he signed blank checks!) and she graciously gave him five dollars per week as his allowance. This patient, horrified at the extent of his self-damaging tendencies, changed in a few

weeks. The man who characterized his behavior as "nice, kind and full of the milk of human kindness" became, after a few weeks of treatment, "harsh and overbearing" toward his clients. In other words, by using the defense mechanism of pseudo-aggression, he proved to himself that he was not a "sissy" any more; overlooking, of course, that he also damaged himself with his new ways.

CASE III.—Mrs. C., a nymphomaniac, who lived the life of a half-prostitute, became very penitent after a few weeks of treatment. She claimed that, while she had previously been the "life of every party", she was now rather shy and had completely "lost her grip on men". This provoked her fury, and she claimed that "she came into analysis to lose her frigidity and not to become a nun."

It is of advantage if the analyst is prepared for these eventualities and warns the patient beforehand. These transitory pseudo-successes (they are but defense mechanisms) are dangerous, because they give the patient either the illusion of a cure, (Mr. A.); or, damage the patient professionally or socially, (Mr. B.); or, they may be the signal for running away from analysis, (Mrs. C.). One can avoid these dangers, to a certain degree at least, by preventively explaining to the patient why he will try to assume the other extreme, and also ask him not to be too naive when confronted with a new trick of the unconscious.

At first, the unconscious ego reacts to the analytical "danger" in the same way as to any other difficulty threatening the neurotic balance*; it tries to counteract the difficulty in a routine manner. This routine consists, first, of increasing the strength of the already established defense-mechanism, and secondly, if that is not sufficient, the exchange of the defense mechanism; thereby keeping the neurotic balance. However, the quickly established, new defenses, visible in the early stages of analysis, have nothing whatsoever to do with a real cure, but accomplish exactly the opposite; the maintenance of the neurosis with new devices. Sometimes the establishment of new defense mechanisms is preceded by a period of depression and confusion. The patient bitterly complains of both, using them for the purposes of his resistance. Only the fact that analysis goes after these new defense mechanisms too, convinces the unconscious ego that "routine" handling of the situation does not suffice and that more drastic measures are necessary. It then basically depends on the amount of the "free floating" feeling of unconscious guilt, whether the patient choses the desperate measure of running away from analysis altogether, or allows further attacks against his neurosis, with the ultimate prospect of cure. This phase teaches us, however, never to underestimate the elasticity of the unconscious ego, which is very cunning in devising ever new defenses to keep the neurotic balance.

Sometimes these pseudo-successes, which in general quickly collapse, are used in retrospect as resistance. "In the first weeks of analysis," complain these patients, "I made such remarkable progress. Now I am at a standstill." Progress, or no progress, the patient has his grievances.

Another type of pseudo-progress, which is too well-known to be discussed at length, is the positive transference mirage. The moment the negative transference comes into play, the bubble collapses. There are no short-cuts to an honest, psychoanalytically achieved, cure.

To put the matter bluntly, we want the patient to feel as good as he can, even in analysis; but focusing our attention to the end-result, we are not too much interested in his transitory well-being, provided that he makes progress in *our* meaning of the word. Our situation is comparable to that of a surgeon, who is bothered by the patient with questions as to whether he should read detective stories, or serious novels during his period of suspension in a surgical position, after a complicated multiple fracture.

It is theoretically an interesting problem whether or not the conclusion as to the probable end-result, can be drawn from the initial, newly installed, defense mechanisms. The answer is, paradoxically, yes and no. Since we see that the patient's feeling of guilt can be mobilized, the analytically initiated defense mechanisms are a favorable sign.* Should one, however, draw too far reaching conclusions from these quickly established defense mechanisms toward the surety and acceleration of an ultimate cure, one will be disappointed. Nothing will prevent the patient from playing the whole repertoire of his "use and misuse of interpretations."**

Sometimes the initial, newly created defense mechanisms are dangerous, since the patient misjudges them completely and furiously decides to leave analysis. Here is an example: A writer, a female aged forty, reported that from the age of five until she was ten, she was, as she put it, "selling her looks" to an old man across the street, for fifty cents per exhibitionistic performance. This action could be reconstructed as her first desperate, unconscious attempt to cope with her own voyeuristic conflict; not she, but the old man (father-image) committed the crime of peeping. The mechanism used was first, projection; second, an exchange of one part of scoptophilia for the other (voyeurism into exhibitionism); third, an unconscious identification with the old man's voyeuristic pleasure. The child exhibited twofold; in the performance given and in confessing it to her sister, who was horrified. She thus preferred to take the blame for the defense mechanism (exhibitionism), only to cover up something more important—peeping.*** Why did she, however, accept money? At that time, her

*See the writer's paper: The danger neurotics dread most. Loss of the Oedipal Fantasy. *Psychoan. Rev.*, 33:2, 1946.

*See the writer's: Working through in psychoanalysis. *Psychoan. Rev.*, 32:4, 1945.

**See the paper: Use and Misuse of analytic interpretations by the patient. *Psychoan. Rev.*, 33:1, 1946.

***For details pertaining to the problem of voyeurism versus exhibitionism see: A clinical approach to the psychoanalysis of writers. *Psychoan. Rev.*, 31:1, 1944; and Further contributions to psychoanalysis of writers. *Ibid.* 1947.

father was beating her mercilessly, and every beating was administered with a specific ceremony, including undressing and an official appeal for punishment. The child, at an early age, suspected that her father's motives were not of an entirely punitive nature. In taking money from the old man across the street, she unconsciously directed irony toward her father: "He enjoys it and should pay me for the pleasure, as does the other man." Secondarily, unconscious ideas of self-degradation were included: "This is what father makes out of me."

As previously stated, the patient was a writer and her oral and voyeuristic tendencies were quantitatively increased. In her private life, she behaved in an extremely exhibitionistic fashion. As usual, she used exhibitionism as a defense for her deeper, repressed voyeurism. Interesting, were the rationalizations of this patient when she was asked why she had not done something about her father's cruelty. She claimed that she was "ashamed of her bruises" and of the possibility that the neighbors would have considered her father "crazy." What the child really was afraid of, was that people might understand her masochistic pleasure in this paternal torture. That it was not modesty which prevented her from the exhibitionistically conceived, complaints and exposition of her father, was apparent in the transference. She projected upon the analyst the "bad mother-father" attachment and misconstrued everything as "mistreatment". Without understanding what she was repeating, she started to mobilize outsiders against analysis. The reason was a newly established defense mechanism; since her feeling of guilt was increased because of the analysis of her masochistic wishes, she *now* did what she had *not* done as a child, namely, complain about mistreatment. Thus denying masochistic pleasure, she even produced suicidal ideas and, completely oblivious of the fact that she had attempted suicide three times previously, (the first time at the age of seven!), she started to accuse the analysis of driving her toward death. Every attempt to make the patient understand what she was doing, was futile. In her mobilization of outsiders against analysis, an ironic twist, a quasi-moral alibi was discernible: "You ask why I didn't complain; well, I do now." Thus, analysis was "punished" for disturbing her masochistic pleasure via a newly created defense mechanism.

The Disappearance of Neurotic Symptoms Without the Destruction of Their Unconscious Basis

Let us compare the three following cases;

CASE I.—Mr. D., aged thirty, consulted the author on a Friday, because of a potency disturbance. Each time he attempted intercourse, the erection collapsed. The description and the case history gave the impression of a hysteric individual, so upon the advice of the author, he decided to start treatment on Monday. Sunday night the prospective patient called the author to inform him that the treatment would not be necessary, since he had just had successful intercourse for the first time in his life. His "inflationary potency", as he later called this episode in his troubled life, lasted three months, only to collapse as suddenly as it had appeared.

CASE II.—Mr. E. started treatment because of severe, premature ejaculation. He was in great despair, due to the fact that his wife had left him because he could not satisfy her sexually. During analysis, he behaved like a school boy making fun of the teacher. The interpretations of the oral and anal contributaries of his sexual difficulties were, for him, a never ending source of irony and scorn, and he constantly criticized the author. The fact that the furniture of the author's office, was "modern", was a constant object for merry making. He refused to analyze his senseless objections, especially his constant praise of his own antique furniture, with the excuse that axiomatic statements do not have to be proven. Every attempt to show him that his objections pertaining to problems of taste, covered something else (*f.i.*, sexual comparisons in the transference repetition), since there was no necessity to agree on that score, was futile. One day, after seven weeks of treatment, the patient informed the author that he could no longer afford analysis, since he had invested the money reserved for that purpose in remodelling his apartment with modern furniture. "A guy has the constitutional right to change his opinion", he stated, and furthermore, "he was cured anyhow", since during the last few days, he had acquired a girl friend and had repeatedly had normal intercourse. He left analysis despite the writer's objections and *remained potent.* His unresolved psychic masochism found an even more dangerous depository; by hiding political literature for his socalled friends of different political parties in his country, he railroaded himself in later years into a position where he was repeatedly arrested and had to serve jail sentences, although he himself was indifferent to all kinds of politics.

CASE III.—Mr. F. entered analysis because of premature ejaculation. He was a typical case* and was *cured* after twenty-one months of analysis.

What is the difference between these three cases? From the standpoint of naive description, they were all "cured" and a cynic could even say that Messrs. D. and E. saved time and money. If we look at these cases analytically we can state: Mr. D. was unconsciously, so frightened of analysis, that he preferred to temporarily give up his symptom for the purpose of escaping analysis with a good conscience. His *success because of unconscious fear,* lasted only three months. His subsequent analysis revealed that the element which unconsciously frightened him most, was his repressed oedipal attachment to his mother. His unconscious ego temporarily preferred to sacrifice the symptom instead

*Short genetic survey of psychogenic potency disturbances. *Psychiat. Quart.*, 19:3:4, 1945.

of sacrificing the whole neurosis. Mr. E. achieved the same result after seven weeks of analysis. As his later life proved, he shifted the guilt pertaining to his pregenital *libido* and aggression to provoking jail sentences. The fact that he was really innocent, as far as politics were concerned, was a part of his inner alibi; "I am innocent of the other crime, too." The amazing fact was that he remained potent; general experience with "successes because of unconscious fear" prove conclusively that they collapse after some time. This is one of the pathognomonic features of these pseudo-successes; the other being that no direct connection is visible between the material worked through in the transference neurosis, and the disappearance of the symptoms.* There is only one exception to that empirical rule; cases of potency disturbances. Had the man had any other neurotic symptom, *f.i.,* agoraphobia, erythrophobia, insomnia, neurotic headaches, or what not, the symptoms would have recurred. Why exactly, do some cases, not all by far,—as visible in the case of Mr. D.—show no recurrence? It is a matter of conjecture. I believe that the narcissistic defeat, the most painful possible for a man, embedded in a disturbance of potency, has something to do with it.

There are no miracles in the psychic economy; quantities of *libido* and aggression may be shifted to other points, the sum-total remains the same. From a practical angle, Mr. E. did not improve his situation. Jail is even more painful and objectively damaging than is a potency disturbance. There are no bargains to be had from a neurotic super-ego.

Closely connected with the afore mentioned facts is the problem as to why incorrect interpretations often help. The problem is best explained by reproducing parts of a discussion with an intelligent and belligerent paranoic patient. A colleague wanted the author's opinion in a case which first started with the symptom of blushing (erythrophobia), whereas paranoia was the real trouble. After a few appointments, the patient went into a hypomaniac mood, accompanied by great excitation, complete insomnia and ideas of grandeur. The colleague discontinued his analysis and made superficial psychotherapy for some time. Fully agreeing with the colleague, the author suggested to the patient that he continue psychotherapy with the colleague, with the modification that the psychotherapy should be somewhat deeper, *f.i.,* that his projections should be explained. The patient objected furiously; "According to your statement I am an incurable case. Analysis is impossible in my case, superficial psychotherapy did not work, what else is there to do?" It was explained to him that there is something in between psychoanalysis and superficial psychotherapy; psychotherapy using analytical knowledge. The patient remained angry and skeptical: "If you don't shoot in the center, how can you get a bull's eye?" He was given the following example, "Imagine you have an employee who regularly steals from the cash register but you, the boss, are completely unaware of it. One day, the young man appears very pale to you. You want to make a joke about his too extensive night-life and remark, 'You look very pale to me.' The man misunderstands your remark, believing because of his guilty conscience, that you refer to his thefts. Don't you think that on the basis of this wrong conclusion, the man could stop stealing for a time?"

There is only one reasonable surety against a recurrence of neurotic symptoms and signs; destruction brought about through psychoanalysis of the basis on which these symptoms rest. This is the honest and solid way. Besides this, there are many spurious ways to make a symptom disappear; in neurotic cases, however, strange as it may sound, honesty is the best policy.

A Neurotic Symptom Vs. a Neurotic Personality

The general conception of a neurotic symptom versus a neurotic personality is this; the neurotic "character" is the basis, the neurotic "symptom," the apex of the pyramid. It is like an island emerging from the sea; only the superficial layers are visible. Neurotic difficulties are first absorbed by the personality; only after the "sponge" is oversaturated do the neurotic symptoms and signs make their appearance. The "queer" personality precedes the "queer" symptom.

It is obvious from that conception, that it is easier to change neurotic symptoms than the personality. A good percentage of our patients leave analysis after their symptoms disappear, and they refuse to give us the opportunity to change their personality. True, every analysis is from the very beginning, an analysis of the whole personality; still, our patients make a precise distinction between both—only symptoms are acknowledged by them as sickness. The old saying, "You have to take me as I am" is still used to a great degree.

We are therefore not surprised when, even in most favorable cases, symptoms change first, the personality later. This sequence of events is observable in approximately ninety percent of all analyses. In ten percent, the sequence of events is reversed and here the confusion begins.

The most simple answer is that it just depends on the neurotic deposition of *libido* and *destrudo*. If the main deposition is in the neurotic personality, the symptom changes first. If, however, the opposite is the case, and the main deposition is in the neurotic symptom, the personality changes first. This is sound reasoning, although, unfortunately, a totally unproductive one, since there is no possibility of finding out in advance where the respective deposition is, nor do we understand why the main deposition is not in all cases, first in the personality and only later in the symptoms.

The next possibility is an investigation of different types of analytically treated neuroses. In overlooking the results of phallic, anal and orally re-

*Problems of "successes because of unconscious fear" are discussed in the paper Eight prerequisites of psychoanalytical treatment of homosexuality. *Psychoan. Rev.*, vol. 32, 1945.

gressed cases, we could determine whether any rule in the sequence of changes (symptom vs. personality) is discernible. One could, *f.i.*, theoretically imagine, that in hysteric cases, it is easier to change symptoms and personality, than the personality in oral cases. Nothing of that regularity is visible. There are hysteric cases in which the personality changes remarkably, while the "simple" symptom persists for a long period of time. On the other hand, there are oral cases in which the symptoms disappear quickly and the personality is more difficult to change. To turn the tables; there are hysteric cases in which the symptoms change quickly, although the personality is resistant; whereas, in some oral cases, the personality changes and the symptoms persist. In other words, the problem is not to be solved only on the basis of stating the amount of regression.

A third approach could resign itself to the empirical rule that symptoms change quicker than the personality. The rather exceptional cases in which the opposite happens, could be registered as unexplainable.

A fourth theory could claim that one should always take into account that the nonchangeable part, be it symptom or personality, was incorrectly interpreted. Such cases do exist; we exclude them because we speak of typical cases in which we assume that the analyst knows what he is talking about.

A fifth possibility is this; one could doubt whether the changes observable in the personality are not pseudo-changes in the first place.

The author is personally not satisfied with these solutions and is rather surprised that our literature does not contain even the simple statement of the problem itself. He believes that every patient, unconsciously, does not want to make more compromises than the *minimum of the minimum of the minimum*. Forced out of his position, he gives in more and more, only to find one decisive resting place for the remnants of his neurosis. He believes, furthermore, that the subdivision in symptomatic and characterological neurosis, although practically useful, is much too schematized. The borderlines are flimsy and rather artificial; they remind one of the wooden signs erected on a plain, stating, "You are entering the state of ....." The plain is the same, before and after the sign.

Basically, what is at stake for the neurotic is this; analysis forces him to give up the decisive parts of his neurosis. His unconscious trio wants to avoid that danger and finds in the end one point of refuge. Whether this point is called "symptom", or "character" is immaterial; basically, it is the *"buen retiro"* of his neurosis.

Let us take two clinical examples: Mrs. G., a hysteric, entered analysis because of frigidity and constant conflicts with her husband. She caused the greatest difficulties to the analyst and for a long time, projected upon him the hatred toward her mother. She "fought like a wild animal" (her own words in retrospect) against male prerogatives, her penis-envy was overdimensional. After some time, it was possible to discard this hatred as having been a fear of being seduced by her father. Upon analysis, she "came to terms" with analysis; the conflicts with her husband, the scenes and threats of leaving home and her threats of suicide disappeared. She even became a successful businesswoman, and learned to adapt herself to a difficult reality. Sex, which she previously hated became "fun", but no orgasm was forthcoming. Here, we have an example of remarkable personality changes with the retainment of the neurotic symptom.

What was at the bottom of her frigidity? The superficial layers were a hysteric penis-envy and an oedipal rape fantasy. After long "working through", sex became "fun" without achieving an orgasm. It turned out that her conception of sex was that of "being blasted to pieces", being killed. She concentrated all her masochistic fantasies at that point, and her frigidity was a defense against that imaginary danger. In a dream she represented the intercourse of two snakes; the male snake whirled the female snake in the air for so long a time that the latter died. The patient's holding on to her frigidity simply meant that this part of her neurosis was untouchable, therefore the defense, too, was indestructible.

In contradistinction to this case, Mr. K. went into analysis because of paranoic jealousy. After long working out of the negative *Oedipus* and the voyeuristic components*, his symptom subsided. His personality was, however, imbued with psychic masochism patterned after the formula "nobody loves me". He cleverly constructed situations of that type, and for a very long time was holding on to that depository of his sexualized passivity.

Comparing both cases, we have to state that though the sequence of changes was exactly opposite, (Mrs. G., a personality change first; Mr. K., a symptom change first), they had one point in common; *the most conspicuous deposition of the neurosis was changed first*. In the case of Mrs. G., the conflicts with her husband and her inability to earn money were in the foreground; in the case of Mr. K., the "great man" was offended that he was ridiculously conspicuous in his jealousy. In other words; the deposition of remnants must be first, *inconspicuous* to the outsider, second, *give an alibi* that "so much changed already", third, *the narcissism must not be hurt too much*. It is possible that these three points give the clue for the choice of the deposition of neurotic remnants.

Symptom or personality; both are used as a depository of the remnants of neurosis—even in well conducted analyses. It can be admitted, however, that some confusion remains concerning the specific choice. Why steal the show from future generations of scientifically interested psychoanalysts?

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*See the writer's: Contributions to the problem of jealousy. *Int. Z. f. Psychoan. und Imago*, 24:4, 1939.

THE DIETARY MANAGEMENT OF DIABETES

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Before considering the proper diet for the diabetic, it would be well to examine what is considered as the optimum diet for a normal individual.

Normal Diet

The National Research Council (8), has recommended the following caloric allowances, based on body weight, sex and physical activity (Table I).

NORMAL CALORIC ALLOWANCES

	Man (154 *lb.*, 70 *kg.*)	*Woman* (123 *lb.*, 50 *kg.*)
Sedentary	2500	2100
Moderately active	3000	2500
Very active	4500	3000

TABLE I

The total calories should be divided into the proper proportion of carbohydrate, protein and fat. Barach (1), found that the normal diet obtains 65 percent of its calories from carbohydrate, 15 percent from protein and 20 percent from fat. Best and Taylor (3), suggest dividing the total calories into 53 percent carbohydrate, 12 percent protein and 35 percent fat. The National Research Council has adopted the following proportions: carbohydrate 59 to 64 percent, protein 6 to 11 percent and fat 20 to 35 percent, varying with the total caloric allowance.

The best information now available indicates that the protein requirement lies between 70 and 100 grams daily. Formerly, the average daily intake in the United States approximated 120 grams. The American soldier in a training camp eats no more than 125 grams per day (5). It has been quite conclusively proven (3), that the nitrogen equilibrium can be satisfactorily maintained on 40 grams of protein per day. It can be concluded, therefore, that one gram of protein per kilogram of normal body weight, will provide all the protein needed to maintain the nitrogen equilibrium in an adult in a sedentary or moderately active occupation. More, is an unnecessary excess which adds to the load on the metabolism.

The exact fat requirement for a normal individual is unknown. As a rule, fat allowances are based on food habits. Those who work harder and use their muscles more, usually eat more fat by choice. The American soldier in a training camp, who receives an unlimited diet, eats no more than 178 grams per day (5). The National Research Council (8), has suggested that fat should constitute about 25 percent of a normal individual's diet. This is only 82 grams of fat per day, in a 3000 calory diet.

Diabetic Diet

Although the chief disturbance of the diabetic is in the utilization of carbohydrate, it must be remembered that the metabolism of protein and fat is also affected. Diabetes should be considered as a disease of the total metabolism and not of carbohydrate alone. Hence, the one most important restriction in the diet for the diabetic is a reduction in the total caloric intake. The caloric allowance for the diabetic should be approximately 20 to 30 percent less than for the normal individual.

However, the ratio of the carbohydrate, protein and fat in the diabetic diet, should be maintained as near to the normal proportions as possible. In our experience, Best and Taylor's figures of carbohydrate 53 percent, protein 12 percent and fat 35 percent are ideal for division of the total calories. In the diabetic diet, such a division allows adequate protein, approximating one gram per kilogram of normal body weight. The fat averages between 80 and 90 grams daily, which produces a palatable diet. There are more calories derived from carbohydrate and protein than from fat, and this tends to keep the diabetic safe from ketosis. The carbohydrate content is sufficient to permit enough fruits, vegetables, cereals and bread to maintain adequate nutrition and allow an adequate intake of minerals and vitamins.

IDEAL WEIGHTS—AGES 25 AND OVER

Height in inches (with shoes)	*Weight Male*		*Medium Frame Clothed Female*	
	lb.	*kg.*	*lb.*	*kg.*
59			114	52
60			117	53
61			119	54
62	128	58	121	55
63	132	60	123	56
64	136	62	128	58
65	139	63	132	60
66	143	65	136	62
67	147	67	139	63
68	151	69	143	65
69	154	70	147	67
70	158	72	150	68
71	163	74	154	70
72	167	76	156	71
73	172	78		
74	178	81		
75	184	84		

Small frame—Subtract 10%. *Large frame—Add* 10%

TABLE II

Diet Formula

A simple diet formula, which yields a diet embodying the above principles, has been in clinical use for some time (9). By this method the diet is individualized for each patient; a maintenance diet is prescribed which rarely requires further change. This is a much more satisfactory method than starting at 100 grams of carbohydrate and increasing the diet every few weeks, as has been done by various workers in diabetes (4). With this formula, one

can prescribe a diet for the diabetic, based on his sex, height, physical activity and normal weight, which will meet all of his bodily needs. This constitutes his maintenance diet on which he can maintain his weight and energy.

Having prescribed this maintenance diet, one can proceed to render the urine, sugar free, with insulin if necessary. Experimental work in diabetic animals (2,7), indicates that vigorous treatment of the early diabetic should be instituted and maintained, to avoid the likelihood of further degenerative changes in the pancreas.

The steps involved in calculating a maintenance diet are fourfold:

1. Determine the normal body weight in kilograms for the height and sex, from the table (Table II).

2. Select the proper caloric allowance, per kilogram normal body weight, based on physical activity from the table (Table III).

CALORIC ALLOWANCE PER KG. NORMAL BODY WEIGHT	
Adult female	25
Adult male	30
Sedentary life	25
Light work (professional and business men)	30
Moderate work (mechanics)	35
Heavy work (laborers, athletes, etc.)	40

Table III

3. Determine the total caloric allowance per day by multiplying step 1 by step 2.

4. Divide the total caloric allowance into carbohydrate, protein and fat by using the simple diet formula (Table IV).

THE DIET FORMULA	
Protein	1 gram per kilogram normal body weight
Fat	80 to 90 grams per day
Carbohydrate	enough to make up the remainder of the total calories

Table IV

To illustrate the simple procedure for calculating a maintenance diet, the following example is appended in tabular form (Table V).

SAMPLE CALCULATION OF A MAINTENANCE DIET			
Patient's ideal weight is 154 lb.			70 kg.
70 kg. x 30 calories			2100 cal.
70 kg. x 1 gm. (Prot.) = 70 gm. x 4 cal.			280 cal.
80 gm. (Fat) x 9 calories			720 cal.
280 cal. (Prot.) plus 720 cal. (Fat)			1000 cal.
Total daily requirement			2100
Cal. supplied by prot. and fat			1000
Cal. to be supplied by carb.			1100
1100 calories divided by 4			275 gm.
Patient's diet is:	Carb. 275 (52%)	Prot. 70 (13%)	Fat 80 (35%)

Table V

As can be seen by the foregoing example, this formula yields a diet that closely follows the proportions of the normal diet. It is true that the diet may be called a "high carbohydrate" type, but in our experience it is not true that such a diet automatically requires the use of insulin. Nor is it true that such a diet requires more insulin than a "low carbohydrate" diet. There are still many physicians who prescribe the inordinately low carbohydrate diets of the pre-insulin area. There are still others who are "carbohydrate conscious" and, who, on general principles, avoid diets containing over 150 to 200 grams of carbohydrate. We believe that a maintenance diet should be written for each diabetic, on an individual basis, by the formula outlined herein, regardless of how much carbohydrate is allowed.

It is best to have a dietitian translate the diet prescription into the various foods that constitute the patient's menu for the day. It has been our practice to divide the diet into three equal meals; as this is normal for normal persons, the patient need not adjust himself to a change. The one exception to this plan, has been in those patients receiving protamine insulin. Such a diabetic is given a small evening feeding, to avoid the symptoms of hypoglycemia which are apt to occur in the early morning hours. Occasionally, one may subtract 20 grams of carbohydrate from a meal which has been followed repeatedly by glycosuria, and add this carbohydrate to another meal during the day. Such a procedure has been most often necessary for postprandial glycosuria after breakfast. This slight adjustment in the diet has many times obviated the necessity of giving an additional dose of regular insulin before breakfast. We have never found it necessary to make other, more complex diet divisions for the adult diabetic. Feedings between meals are avoided in order to make life simpler for the diabetic.

During his short initial stay in the hospital, the patient should receive instructions from the dietitian in calculating and weighing his diet. When insulin is necessary, the nurse should give the instructions for measuring and administering the insulin. This has been the most satisfactory manner of giving the patient the proper start on his diabetic way of life.

The following cases are appended to illustrate that the type of diet outlined is ideal for the patient, and that more insulin is not needed to cover the proportionately higher carbohydrate in the diet. These patients were all hospital cases, under close supervision, so that their diabetic status could be observed daily. The results in all our patients have been uniformly good; none have shown an increased need for insulin on the diet outlined.

Case Reports

Case I (Fig. 1).—A thirty-one year old sergeant was admitted to a hospital in India, in February, about a month after the symptoms of diabetes were noted. A glucose tolerance test showed a peak blood sugar of 390 mg. percent. Initially, he was placed on a "low carbohydrate diet", with no exact specifications as to carbohydrate, protein and fat. With this, he was given 15 units of regular insulin daily; later, he was given a diet of carbohydrate 75, protein 150, fat 66; total calories 1494. This was increased after ten days to carbohydrate 150, protein 150, fat 66; total calories 1794. With the increased

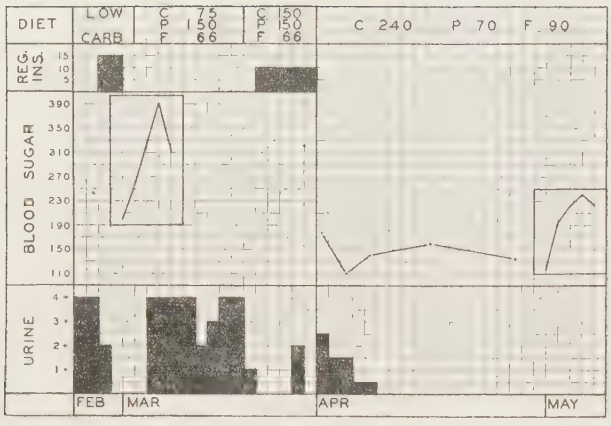

FIG. 1

diet, he was given 10 units of regular insulin. During this period of overseas hospitalization, he was sugar free for just six days.

On admission to our hospital in April, the patient was placed on a maintenance diet of carbohydrate 240, protein 70, fat 90; total calories 2050. On this diet, he required no insulin. Within five days, he became sugar free and remained so for the rest of his hospital stay. The reduction of the excessive protein intake and the increase of the carbohydrate portion of the diet, resulted in a more physiological diet without requiring insulin for control of his diabetic state.

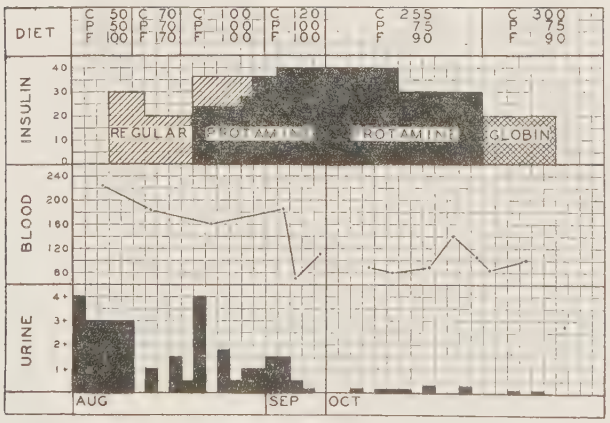

FIG. 2

CASE II (Fig. 2).—A twenty-six year old corporal was admitted to a hospital in England, in August, about two months after the onset of symptoms. His initial diet resembled those of the pre-insulin era, and contained carbohydrate 50 grams, protein 50 grams, fat 100 grams; total calories 1300. During his five weeks of hospitalization overseas, four different diets were prescribed. The maximum carbohydrate allowance reached 120 grams and the maximum caloric intake was 1780 calories. With these diets he was given up to 40 units of insulin daily, but was sugar free for only five days out of the five weeks of hospitalization.

On admission to our hospital in October, he was placed on a maintenance diet of carbohydrate 255 grams, protein 75 grams, fat 90 grams; total calories 2130. As his tolerance improved, the diet was increased to carbohydrate 300 grams and total calories 2130. The insulin need was gradually reduced from 40 to 20 units daily. He was practically sugar free at all times and only rarely showed a trace of sugar in his urine; yet, his carbohydrate intake had been increased from two and one-half to six times more than the amounts he had been given at the previous hospital.

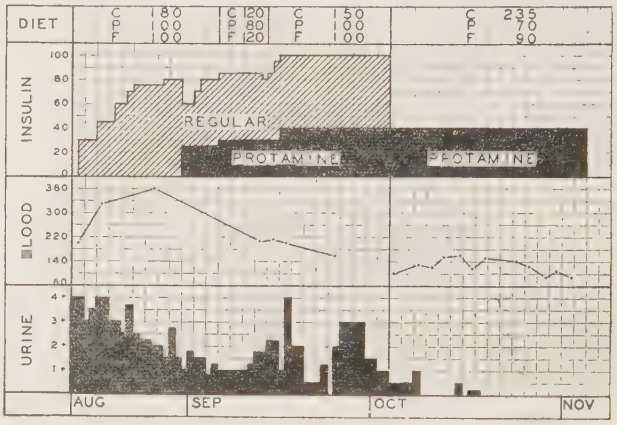

FIG. 3

CASE III (Fig. 3).—A twenty-seven year old private was admitted to a hospital in Germany, in August, about a month after his symptoms began. He was given three different diets during his hospital stay overseas, averaging carbohydrate 120-180 grams, protein 80-100 grams, fat 100-120 grams; total calories 1880-2020. He received from 75 to 100 units of insulin daily, but without an adequate control of his diabetes. There was persistent hyperglycemia and glycosuria.

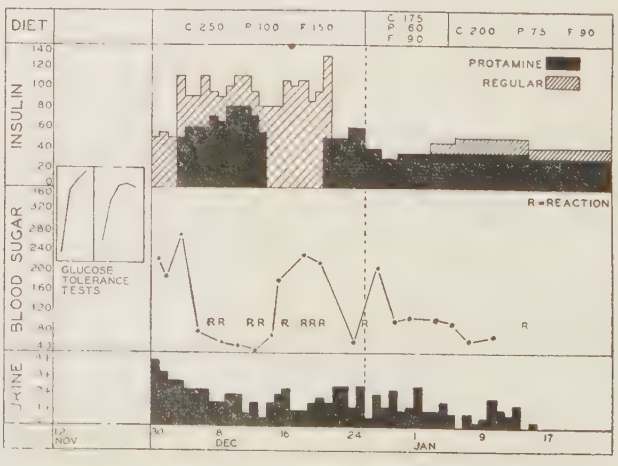

FIG. 4

On admission to our hospital in October, he was placed on a maintenance diet of carbohydrate 235 grams, protein 70 grams, fat 90 grams; total cal-

ories 2030. With this, he received 40 units of insulin daily and promptly became sugar free and remained so.

It is our belief that a physiologically proportioned diet is an essential for the diabetic. It is obvious that changes of the diet formula every few days only confuse the patient, the dietitian and the doctor, and that it defers the day when the patient becomes sugar free.

Case IV (Fig. 4).—A twenty-six year old female, a private in the WACS, was admitted to a hospital in this country in November, about two weeks after her symptoms began. Because two fasting blood sugar tests showed an elevation above normal, two glucose tolerance tests were made to establish the diagnosis of diabetes. This confirmed what had been apparent on the day after her admission, namely that she was diabetic.

She was then transferred to our hospital and was treated on another service for approximately one month. Her diet was carbohydrate 250 grams, protein 100 grams, fat 150 grams; total calories 2750. This diet was in error in several respects; both the total calories and the protein allotment were more than the patient needed. Also, the carbohydrate and fat content of her diet were practically reversed, in that, she was receiving 50 percent fat and only 36 percent carbohydrate. Her insulin requirement was high, ranging between 80 and 130 units daily. She showed considerable glycosuria and had many insulin reactions.

When we first saw her, we ordered a 1750 calory diet so as to enable us to reduce her insulin intake abruptly and avoid further insulin reactions. Within ten days, she was placed on a maintenance diet of carbohydrate 200 grams, protein 75 grams, fat 90 grams; total calories 1910. With this, she received 50 units of insulin daily and became sugar free after a short time.

This case illustrates that what appeared to be a high carbohydrate diet at first inspection, actually was a higher fat diet. It also shows that if such a moderately high calory diet cannot be tolerated without large doses of insulin, that the "free diet" treatment of diabetes is doomed to failure. Most diabetics dogmatically believe in the harmful effects of starches and sugars, but consider fats and proteins as being harmless in the diet. When told to eat what they please, diabetics will voluntarily limit their carbohydrate and increase the protein and fat to make up the calories in their diet. The result is an unphysiological diet and an abnormally high insulin requirement, if a sugar free state is to be maintained. If hyperglycemia and glycosuria are ignored over a period of years, inestimable harm will come to these diabetics (6).

Summary

1. The principles of a normal physiological diet are followed in prescribing a diet for the diabetic.

2. A simple method for estimating the total caloric requirement per day for each individual diabetic, based on sex, age, height and physical activity is described.

3. The distribution of the diet into its component parts of carbohydrate, protein and fat is easily achieved by a simple diet formula.

4. Representative cases are reported, showing that such a diet usually results in a decreased need for insulin, despite a larger amount of carbohydrate in the diet.

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Medical Arts Building.

PROGRESS IN THE TREATMENT OF HEART DISEASES

A Review of the Literature

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Methods of treating cardiac diseases are changing, in response to improvements in surgical technique, discovery of new drugs or refinements in the use of well-known agents and fuller recognition of psychogenic factors and physiological mechanisms. It is extremely gratifying for the medical profession to witness progress in therapy, especially when it applies to ailments that were formerly fatal.

Congenital Defects

Congenital heart defects, states Stewart (1), may be corrected surgically. Ligation of a patent ductus arteriosus apparently restores normal circulation. Diagnosis of this defect is based on a continuous machinery murmur over the pulmonic area, a thrill over the pulmonic area, no axis deviation in the electrocardiograms, pulmonary conus and left ventricular enlargement visible roentgenologically, increased pulsation of the pulmonary artery, pulmonary vessels and left ventricular margin, wide pulse pressure, stunted growth and absence of cyanosis. Underdevelopment and undernutrition or evidence of subacute bacterial endocarditis are indications for an operation in those patients with uncomplicated patency.

Cyanosis in patients who have congenital malformations of the heart, with pulmonary stenosis or atresia, may be reduced by surgical anastomosis between a branch of the aorta and one of the pulmonary arteries, in order to increase the flow of blood through the lungs.

Aneurysm of the Aorta

Aneurysm of the aorta may be treated successfully by electrocoagulation, with a fine, insulated coin-silver wire, introduced through a needle into the aneurysm, allowed to coil in the aneurysmal sac. In time the coagulation will become a mass of fibrous scar tissue.

An aneurysm above the constriction of coarctation of the aorta may be removed after ligation on both sides, as collateral channels with a reversal of blood flow are already prepared by the congenital defect. An aneurysm of the left ventricle may be strenghthened by reinforcement with a piece of facia lata, applied over the bulge, inside the pericordial sac.

Bed Rest

Levine (2), summarizes the harmful effects of recumbency in the treatment of heart disease, as follows: "Rest in bed, which has been the backbone of our treatment of heart failure, needs consideration in the light of some possible harmful effects."

There is both clinical and laboratory evidence to show that recumbency may be very harmful for certain patients with heart failure. At certain stages of heart failure, the heart may work more, rather than less, and pulmonary congestion may be made worse rather than better by placing the patient in bed. Making the bed slant downward, by placing nine inch blocks of wood under the head posts, is a simple method of minimizing this undesirable effect. At times, it is wise to treat patients with heart disease in a chair, rather than in bed.

Cardiac, as well as noncardiac patients who are confined to bed for any appreciable length of time, should be instructed to exercise their legs frequently or to have their legs massaged, in order to prevent venous thrombosis of the legs and pulmonary emboli.

Nutritional Deficiency

Vitamin B.—Freedberg and Blumgart, as quoted by Nahum and Doff (3), have described a case of heart disease with signs of vitamin deficiency, where oral administration of thiamine chloride was ineffectual in combination with known therapeutic measures for heart failure. Their patient continued to fail until the parenteral administration of vitamin B complex, together with thiamine chloride, 100 mg. daily, was started; after which recovery occurred with the most amazing rapidity.

Johnson *et al*, have shown that in healthy laborers, on diets deficient in vitamin B, signs of vitamin B_1 deficiency may appear in a few days. The reason for the early appearance of symptoms in persons doing hard work, is that the increased carbohydrate metabolism uses up large amounts of thiamine. In patients with organic heart disease, anorexia and congestion of the gastrointestinal tract lead to impaired absorption as well as deficient utilization of vitamin B. In many patients with congestive heart failure, signs of vitamin deficiency are usually present and are thus treated. However, in the absence of clinical avitaminosis in the patient in whom heart failure is not relieved by the ordinary methods, parenteral vitamin B complex and thiamine chloride should be administered.

Digitalis Therapy

Albrecht (4), summarizes the use of the pure glycosides as follows: Although there is still much work, both clinical and pharmacological, to be done on the cardiac glycosides, it is safe to predict that in the not too distant future, all digitalis therapy will be given in the form of glycosides. The difference in the glycosides is so great, that one single glycoside does not suffice for all clinical needs. Just as we need short and long acting barbiturates, so do we need, at times, those that are eliminated slowly. The digitalis powdered leaf is a complex mixture of a number of substances. The substances of interest in this preparation are the glycosides. The cardiac glycosides have a sterol nucleus and are thus related to Vitamin D, the estrogens and the adrenal cortical hormones. To further complicate matters, there may be varying degrees of hydrolysis of the various glucosides in the same preparation, and, unless the preparations are fairly constant, the variation in potency may be considerable.

Clinical Use of the Glycosides

A number of glycosides are now available for clinical use and, although our knowledge of them is not complete, sufficient information has accumulated in our literature to indicate the probable scope of their clinical use:

Digilanid.—The problem of the variability in the ratio of the glycosides to each other in the powdered leaf, has been surmounted in this product. The glycosides lanatosides A, B and C are isolated and then recombined in fixed proportions, one to another; this insures uniform potency. It can be substituted

for the powdered leaf with the same cat assay value, with the assurance that the patient will not be poisoned.

Cedilanid or lanatoside C.—Lanatoside C and digoxin are very closely related to each other, since digoxin is derived from lanatoside C; however lanatoside C is more rapidly eliminated. Experimental work shows that lanatoside C seems less toxic than preparations of Digitalis purpurea and also that some patients who cannot tolerate Digitalis purpurea, can take lanatoside C in sufficient doses to aid in the relief of their heart failure.

Maintenance Dose: 1.25 mg. per day (4.5 cat units—Fahr and La Due); 1.3 to 2.5 mg. per day (Kwit, Gold and Cattell); 1.4 mg. per day (De Graff Batterman).

Since elimination is rapid, large doses are necessary, and when given intravenously, the dose is 1.5 mg. (equivalent to 6 cat units), given over a period of from two to three hours. When given by mouth, the digitalizing dose is at least 7.5 mg. in divided doses, over a twenty-four hour period. Because of the drug's rapid elimination it is difficult to render a patient toxic; it is also more difficult to keep a patient on the proper therapeutic level of digitalization.

Digoxin.—Digoxin is closely related to lanatoside C; it also is rapidly eliminated, more rapidly than digitoxin, but less rapidly than lanatoside C. The therapeutic digitalizing dose by mouth, in twenty-six patients, was found to be between 2 and 5 mg. The toxic dose was twice this amount; in terms of cat units, the dosage closely parallels that of the powdered leaf.

Maintenance Dose: The average daily maintenance dose is 0.75 mg.

Digitoxin.—The digitalizing dose is 1.0 to 1.25 mg. by oral administration; the toxic dose is roughly twice that amount. The average maintenance dose is 0.1 to 0.2 mg. (Gold and co-workers). This drug is slowly eliminated and toxicity from the drug may persist for quite some time; accordingly, patients who receive the drug should be under close supervision at all times.

Ouabain and Kombe strophanthin.—Strophanthin is used in two forms, in the form of ouabain, and kombe strophanthin. Ouabain is crystallized and therefore is uniform; while kombe strophanthin is amorphous and varies in composition from lot to lot. Both are poorly absorbed and therefore are best given intravenously. They are rapidly eliminated.

Where depression of the conduction path is desired, digitalis is markedly superior to ouabain. The fundamental action of ouabain is expressed, not so much in terms of the functions it depresses, but rather in terms of the myocardial functions which it stimulates. The tone and contractivity of striated muscle fibers are reinforced and bring about an increase in systolic contraction and a diminution in the size of the heart. These effects are superior to those obtained with digitalis.

In a recent paper Chavez (5), pointed out the indications for both drugs. *Ouabain*: Acute heart failure; paroxysmal nocturnal dyspnea; acute pulmonary edema (left ventricular failure); chronic failure of the left ventricle; chronic coronary insufficiency; long established hypertension and complicated syphilitic aortitis. *Digitalis*: Congestive heart failure with a pronounced tachycardia, b. auricular fibrillation; rheumatic heart disease; chronic valvular lesions of young persons and heart failure, of any type, when under control and requiring sustained and prolonged treatment.

Dosage of ouabain: It is recommended that ouabain be given as one intravenous injection daily (0.25 mg.), for a series of six doses. Subsequent dosage is calculated upon the individual tolerance and the amount of clinical improvement obtained.

Eggleston advises that the dosage of ouabain be placed in 10 cc.'s of fluid and that five to ten minutes be allowed for the injection. The effect is noticed in a few minutes and reaches its maximum in about one hour. Ouabain is rapidly excreted, but is so slowly and irregularly absorbed from the intestinal tract, that its oral use is contraindicated.

Myocardial Infarction

The treatment of a case with myocardial infarction has been outlined in two excellent contributions by Kistin and Mazer (6), and de La Chapelle (7), as follows:

a. Reduce the work of the heart by absolute mental and physical rest; *i. e.*, through the use of morphine and atropine. Reduce the caloric intake.

b. Increase the oxygen supply by the oxygen tent or B. L. B. mask and by employing vasodilator drugs; *e. g.*, aminophylline, theobromine, papaverine.

c. Maintain cardiac nutrition by means of vitamins added to the diet and, in the presence of anemia, by the transfusion of whole blood.

d. Prevention of complications: 1. Ectopic rhythm by means of barbiturates, quinidine, papaverine. 2. distension and 3. thrombosis of the leg veins.

e. Treatment of complications; *e. g.*: 1. In arrhythmias, by quinidine; 2. In Adams-Stokes syndrome, by adrenalin; 3. In syphilis, discontinue the treatment; 4. In congestive heart failure, by mercurial diuretics and digitalis, and 5. In shock, by general measures and plasma if necessary, in small amounts around 200 to 250 cc.

Papaverine

Papaverine is an opium alkaloid of the benzylisoquinoline group; it is of a low toxicity and is nonhabit forming. At the present time, its widest clinical use is in the treatment of conditions associated with smooth muscle spasm, *e. g.*, peripheral vascular embolism, pulmonary embolism, Raynaud's disease and ureteral or other types of visceral spasm.

According to Elek and Katz (8), the oral administration of papaverine in heart disease is indicated in 1, the management of patients suffering from an anginal syndrome and 2, the eradication of premature beats. Its use intravenously, is indicated

for temporary abrogation or diminution of the frequency of premature systoles when these constitute a hazard (*e. g.,* following a myocardial infarct), and also for the alleviation of a severe paroxysm of anginal pain. There is no contraindication to its use except, possibly, intravenously in a complete auriculoventricular block.

Oral papaverine in doses up to 3 grains, four or five times a day, had a decided effect in eradicating or reducing the frequency of premature auricular, nodal or ventricular systoles. In this respect, its favorable action is comparable to that of quinidine. Papaverine is a potent and lasting coronary vasodilator.

Fluids in Congestive Heart Failure

For edematous patients, if the sodium chloride is reasonably restricted, states Schemm (9), and if the physiological effect of metabolic acids in mobilizing and eliminating sodium is not retarded by an excess of basic ash, or is augmented by a neutral diet and small amounts of acid drugs, large amounts of water are safer and more beneficial than restricted fluids. A high fluid regimen is valuable not only in cardiac and renal disease but in eclampsia, cirrhosis and severe injuries.

Schemm further states that the vaporization of water from the lungs and skin for temperature regulation alone, may take 800 to 5,000 cc. Correction of a simple water deficit, often present in seriously ill, edematous patients, may require up to 6,000 cc. Some nonedematous patients must be given a great deal of water with salt for body fluid replacement, before any water is available to the kidneys. In edema formation, 1 liter of water is diverted as a solvent for every 9 gm. of excess sodium salt retained. To excrete solids, badly impaired kidneys may require four to five times as much water as normal kidneys. Consequently, although in health a water balance may be maintained with 1,500 cc. daily, in severe dehydration and edema, fever, sweating, and damaged kidneys, 6 to 8 liters of fluid may be required for a day or two and 4 to 5 liters daily thereafter; 2 to 3 liters daily is enough only in a mild involvement.

Milk, juices of vegetables and of all fruits, except prunes, plums and cranberries, produce an excess of basic ash; proteins produce an acid ash. On this basis, states Schemm, each feeding is balanced to yield a neutral ash, or a slight excess of acid ash. In the initial neutral diet, the portion giving a basic ash, limited to six cups of milk, or milk and one-third cream daily, is supplemented by an acid ash portion containing at least one egg, or two slices of bread, or one cup of prepared or cooked cereal for each cup of milk. In the full neutral diet, the basic ash portion consists of not more than one pint of milk and two servings each of vegetables and fruit in twenty-four hours; the acid ash portion contains not less than two eggs, one serving of meat, fish or fowl and five slices or servings of bread or cereals.

The patient is instructed to eat all of each feeding, or, if an acid ash item is omitted, to deduct an equivalent amount of basic ash food. The strictest diet contains a little over two gm. of salt; in milder cases and during anorexia, the precaution against salt in the cooking is relaxed because, within limits, the amount of salt is less important than the net diet reaction.

In a recent paper on fluids in congestive heart failure, Leevy (10), comes to the following conclusions:

1. On fluids *ad libitum,* the average cardiac patient consumed approximately 1,700 cc. daily during the summer, 1,300 cc. daily during the winter and 2,200 cc. daily with febrility, without ill effects in any instance. Patients on fluids *ad libitum,* were much more comfortable than members of the other groups studied.
2. In general, compensability is independent of fluid therapy. No effect of fluid therapy on mortality was noted.
3. Essential therapy in congestive heart failure is the judicious employment of bed rest, digitalis, diuretics and sedatives, and an acid ash, salt-poor diet providing sufficient calories, minerals and vitamins.
4. With a restricted sodium intake, restriction of water is unnecessary in treating cardiac decompensation, since it increases the discomfort of the patient and may prove deleterious.
5. In most decompensated cardiac cases, forcing fluids on the patient will neither retard nor facilitate compensation. When congestive failure is complicated by sepsis requiring chemotherapy, azotemia or dehydration in associated medical or surgical conditions, fluids should be forced, in order to obtain optimum therapeutic results.

In acute heart failure, the signs supersede the symptoms. In chronic heart failure, the symptoms out-number the signs. The common symptoms are: dyspnea, orthopnea, palpitation, cough, vertigo, weakness, precordial pain. The signs are: Cardiac-anatomical lesions; congestive features—visceral engorgement and peripheral edema.

In planning the medicinal course, the treatment is dictated according to Baltzan (11), by four conditions: 1. Does the myocardium need reinforcement? 2. Does the existing rhythm need stabilizing? 3. Do peripheral barriers exist? 4. Does the coronary circuit need assistance? It is possible that all four problems exist at the same time and often all are taken care of by one maneuver.

For reinforcement of the myocardium, the digitalis group of drugs comes first; quinidine and caffeine come next, in the order mentioned. Digitalis therapy calls for an adequate therapeutic dose, sufficient to influence the heart rate and affect diuresis.

Acute Coronary Disease

Peters and his associates (12), tested the effects of dicumarol in a controlled study of acute coronary thrombosis. No standard dosage was used, but after measuring the initial prothrombin time, the first dose was usually 300 mg. Subsequent doses were estimated by the patient's response to the pre-

vious amount. This method of treatment is at present in the experimental stage, and no patient should be given dicumarol unless hospital and laboratory facilities are at hand for the accurate control and observation of the therapy. Dicumarol should not be given to patients who have renal disease, liver dysfunction or a hemorrhagic tendency.

The report of the results of dicumarol therapy in the series of cases presented is impressive. Of one hundred and ten patients studied, fifty received dicumarol. The incidence of clinical embolism in the treated group, in which the prothrombin activity was maintained between 30 and 50 percent for about six weeks, was 2 percent as compared with 16 percent in those who did not receive the drug. The mortality rate in the treated group was 4 percent as compared with 20 percent in the control patients.

Angina Pectoris

Suggestions as to the use of roentgenotherapy of the adrenals to reduce the output of epinephrine, or the use of thiouracil for the same purpose in the treatment of angina pectoris, have recently been made. Raab has reported improvement in a few patients treated in this manner, but the danger of harmful side effects of thiouracil must be considered. Ablation of the thyroid has been abandoned for the treatment of angina pectoris, because of the resultant production of myxedema.

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Observation and Interpretation Versus a Multitude of Tests

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Those of us who were fortunate enough to be taught by the masters of years ago and are still on the scene to evaluate the trend of the modern practice of medicine, can well appreciate their teaching and guidance. In the old Bellevue Medical College, a pioneer in medicine, the late Dr. Herman M. Biggs, who headed the medical department, established a special class in clinical medicine whose purpose and mission was to arrive at a diagnosis purely on the basis of inspection and deduction. His favorite question was, "Do you look or do you see in your mind's eye?"—observation and interpretation.

Considering the high cost of various modern medical tests, it is timely and proper to learn to appreciate bedside incidents that will obviate such expenditure. For fear that he may be misunderstood, the author wishes to emphasize that he does not condemn the various, useful, modern tests when they are necessary and even though they may be elaborate, but he does feel that it is important to sharpen our clinical acumen and thus practice medicine for the benefit of the patient and not for the benefit of heavy charts and records. In some of the hospitals one has to wade through many papers before the true concept of the patient's condition is fully realized.

The author wishes to present a few cases which will bring forth and stress the point—*observation and interpretation,* instead of a multitude of tests.

Case Histories

CASE I.—B. S., a male, aged sixty-five, whose past history is irrelevant, complained of symptoms of decompensation and that he had lost forty pounds within six months. He then developed a pulmonary congestion which was considered to be congestive pneumonitis and became bedridden. The symptoms were treated as they presented themselves and so he was well digitalized. Dehydrants among other things were utilized but to no avail, of course, x rays and E.K.G's substantiated the clinical contention. A host of heart specialists were brought into the picture who fully corroborated the clinical diagnosis. One manifestation, however, led one to ponder the question of why his palms perspired so profusely. When the patient was studied from the angle of a possible hyperthyroid case and the x rays further revealed a masked thyroid, the basal metabolism rate then

showed +40. He was then put on Lugol's solution, gained back his forty pounds and has been well for the past ten years. He is now seventy-five years old.

Here is an illustration of the appreciation of one bedside point; namely undue hand perspiration observed at the bedside turned the tide and saved a life.

The next case to be presented taught the author a valuable lesson that he wishes to pass on.

CASE II.—A male, aged forty-one, was loosing weight and becoming progressively weak. The physical signs revealed a large liver. A multitude of tests were carried out but no diagnosis was possible. Laporatomy was resorted to, and it was learned that the liver was the seat of a metastatic melanosarcoma. In retrospect, the author well appreciates the fact that a diagnosis could have been arrived at if the man's glass eye had been examined, since the eyeball was enucleated from a choriosarcoma. A simple urine test for melanin would have produced the correct diagnosis, whereas a great number of tests failed to do so.

The following case illustrates the great diagnostic highway that a scar could lead to, and where again the entire diagnostic machinery failed to establish the diagnosis.

CASE III.—L. W., a female, aged sixty-four, had had, in 1930, a thyroidectomy performed for the removal of a toxic goiter. In 1933, her chief symptoms were weakness, vomiting, irregular tremors of the arms and legs and marked epigastric pressure. Appreciating the thyroidectomy, and suspecting trauma or enucleation of the parathyroids, the blood calcium was studied and was found to be rather low (7.6). She made a dramatic comeback upon the utilization of the parathyroid hormone and calcium. Recently, that is twelve years later, the family moved to a rather distant zone, where she contracted an upper respiratory infection. After that, she developed symptoms that were analogous to her 1933 episode. A local physician was called in who recommended that she be sent to a hospital, where, for a period of two weeks, all sorts of laboratory tests were resorted to. The vomiting, however became progressively worse and was allowed to go on for so long a time, that she developed alkalosis. The prognosis given the family was hopeless. In desperation, the author was consulted and even before he arrived at the bedside, he advised the attending doctor to administer the parathyroid hormone, calcium and vitamin D; after which she made an uneventful recovery.

How much mental anguish and money the family would have been spared, if the attending doctor had observed and interpreted the significance of the scar across the neck. Another illustration of the significance of a scar.

CASE IV.—A. Z., a male, aged fifty-five, was very ill from what appeared to be pneumonia. He was hospitalized and a certain type of pneumococcus was isolated. The man was sent home, where he had several relapses and thus, a diagnosis of recurrent attacks of suppurative pneumonia was made. When the author saw the patient at his home, he noticed a minute scar on the abdomen. Upon questioning, it was learned that about nine months previous, a mole had been excised. He had also complained of a pain in the shoulder which was diagnosed as an infectious arthritis. The x ray however, revealed this to be a metastatic focus, and in the light of this finding, it was easy to evaluate the pulmonary condition as metastatic in nature. Another illustration of the great diagnostic value of a scar.

CASE V.—A male, aged thirty-six, was suddenly found in a coma. No evidence of anything except a scar on the scrotum was seen. The family later supplied the information that about eighteen months previous, a testicular tumor was removed. An x ray of the chest, as well as the skull, revealed a metastatic foci. Again, we have the story of a scar.

CASE VI.—A male, aged fifty-six, suddenly complained of chills, fever and a rightsided backache. The diagnosis was made easier when a scar on the neck, was noticed and a history of the removal of a carbuncle six weeks before was elicited. Here was a case of a metastatic carbuncle of the kidney. The diagnosis here, was made early, by noticing and evaluating the connection between the scar and the symptoms.

One has to beware of laboratory help that may be misleading. The author recently came across a case where clinically, he strongly suspected the probability of trichinosis, because of both puffed eyelids and face; however, the laboratory report disagreed with the diagnosis. The eosinophile count was normal. Two weeks later the eosinophile count rose to 30 percent and the author then learned that at times, early trichinosis may show a normal eosinophile count.

The author can recall the case of a girl of nineteen, who was a patient in a first class hospital and where she was profoundly studied for a period of two months. The possibilities entertained were: Typhoid fever, brain abscess, encephalitis lethargica and other conditions. Ultimately, in a different institution, the soft lung technique was utilized and a condition of milliary tuberculosis was brought out on the plate; whereas the hard technique method failed to show the condition present (Buckey technique was utilized for the pulmonary evaluation).

There was another case where a needle was inserted into the chest for possible fluid, and the gastric chyme was aspirated. This young woman had tuberculosis. A phrenesectomy was performed, which brought the stomach high into the chest. The x ray certainly looked as if there was fluid in the chest.

The old masters well appreciated the value of keen observation and interpretation, whereas today, we lean too heavily on the various laboratory facilities. The author recalls a case of a friend of his, where the diagnosis had him baffled, and so he called in one of the old masters for a consultation. The consultant found the room darkened and the shade drawn. On questioning, he learned that the patient was annoyed by the light, and on the strength of that observation, he suspected a brain tumor. Upon

further study, his suspicions proved to be correct.

Believing these illustrations to suffice, the author's contention, that while it is well to utilize certain parts of the laboratory, it is at times useless to exhaust the laboratory possibilities when observation and interpretation will bring forth a point that will help us to make the proper diagnosis. Let us focus our attention upon old scars which may reveal a history that could be dramatic in its scope as far as the proper evaluation of the diagnostic condition, as in the case of the hypoparathyroid. The case of the glass eye that must be taken into consideration before a diagnosis is arrived at, and again, if and when the laboratory is improperly utilized or evaluated, will completely throw us off the track.

In closing, the author wishes to note that in the sphere of human progress, the observation and interpretation of the man who noticed the rise and fall of the lid of a tea kettle, brought forth the utilization of steam for power purposes; the observations of Sir Isaac Newton revolutionized the field of physics and Sir Alexander Flemming, who paused and asked himself the question of why a halo surrounded the mold of Penicillin notatum, also started a new era and thus each time, a new era in medicine was born.

Observation and interpretation by the physician in the course of his rounds, may too, spell the liberation or the doom of a fellow human being; and here it is worthwhile to recall the philosophy of our ancient prophets who said, "To save the life of one human being is like saving the whole world."

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VITAMIN E IN HEART DISEASE

II

The Rheumatic Heart

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The authors have discussed elsewhere (1) (2) (3) (4), the value of vitamin E in the treatment of certain types of diseased hearts. In the present paper we are reporting the results of vitamin E therapy in the management of twenty-eight consecutive, unselected cases of acute and chronic rheumatic heart disease.

No attempt has been made to select mild or recent cases in compiling this series. Patients in all degrees of heart failure have been treated, without any regard to the effect they might have on our percentage of good results. It now seems evident that larger doses of vitamin E, combined in some instances with such adjuvant drugs as digitalis, would have improved our final figures considerably. With continued therapy, further improvement is anticipated in many instances. In summary, acute and chronic rheumatic fever cases appear to be helped by vitamin E therapy.

Case Histories

Case	Sex	Age	Age at first attack	Recurrence	Major signs and symptoms	Initial tolerance	Previous therapy	Present therapy*	Results
1	M	68	10		Dyspnea. B.P. 170/100	Unable to sing or conduct. Climbs one flight slowly.	Rest Nitrites	300 mgm.	Can sing but cannot conduct. Climbs stairs readily. No nitrites. B.P. 175/90.
2	F	39	14		Mitral stenosis. Auricular fibrillation. Moderate enlargement of heart.	Idle.	Digitalis	300 mgm.	Lives a normal but easy life.
3	M	22	13		Aortic and mitral stenosis, and regurgitation.	Unable to climb twelve steps. Unable to work.	Rest	250 mgm.	Same murmurs but less intense. Can work twice as hard. Climbs four flights of stairs readily. Dug a well.
4	F	18	15		Aortic and mitral stenosis. Mitral regurgitation.	Unable to climb stairs. Walks slowly.	Rest	300 mgm. One hypo 400 mgm. Sulphamerazine	Now has acute tonsillitis. No improvement.

Case	Sex	Age	Age at first attack	Recurrence	Major signs and symptoms	Initial tolerance	Previous therapy	Present therapy*	Results
5	M	15	10	Active now	Mitral and aortic stenosis and regurgitation. Some enlargement of heart. Acute pain of joints.	Housebound before; now in bed.	Rest Digitalis	300 mgm. Sulphamerazine	Out of bed in seven days and drove fifteen miles to our office. Pulse fell from 120 to 68. Fever fell from 100.5 to normal in three days. Joints greatly helped in six days.
6	F	65	?		Auricular fibrillation. Some pulmonary edema. Edema plus of the legs.	Housebound.	Rest Digitalis	300 mgm. Digitalis for pulse rate	Pulse fell from 108 to 88. Residual ankle edema plus. Much more active. Still fibrillating.
7	F	55	16		Auricular fibrillation. Mitral and aortic stenosis. Large liver. Ankle edema.	Has four to five pillows. Unable to walk two blocks. Many leg cramps.	Digitalis	300 mgm. Digitalis for pulse rate	Can do full housework. Less dyspnea. No leg cramps. Lips still cyanosed. Still fibrillating.
8	M	37	5		Auricular fibrillation. Slight heart enlargement. Ankle edema plus. Dyspnea.	Can climb only one flight. No physical work for six years.	Digitalis Phenobarbital. Rest	400 mgm. digitalis	Can climb better. Can row a boat.
9	F	47	4	Frequent tonsillitis	Mitral stenosis. Hypertension. Dyspnea. Angina.	Light housework, with many rests.		300 mgm.	Less dyspnea. No pain. Can do full housework.
10	M	15	9	Two	Mitral stenosis. Dyspnea. Fatigues easily.	Unable to swim. Walks very slowly.		250 mgm.	Can now swim and do farmwork.
11	F	52	S.F. 40		Palpitation. Dyspnea. Moderately enlarged heart. Auricular fibrillation. Mitral and aortic regurgitation. Ankle edema plus.	Has three pillows.		250 mgm. 400 mgm. Added digitalis	Worse. Unimproved. "Feels better than in seven years." No symptoms. Does all her farmwork. Needs only one pillow. Still fibrillating.
12	F	54	16		Ankle edema, two plus. Dyspnea. Varicose ulcers on each leg. Marked enlargement of heart. Auricular fibrillation. Mitral stenosis and regurgitation. Aortic regurgitation. Pulmonary edema. Slight liver enlargement.	Idle.	Digitalis	250 mgm.	Very weak. Then dyspnea cleared, and ankle edema decreased. Lost six pounds. Heart size decreased in a month. Still fibrillating. Pulse fell from 96 to 84.
13	F	29	7	One	Aortic regurgitation. Constrictive pericarditis?	Can walk one block. Intermittently confined to bed	Digitalis Nitrites	200 mgm.	Can now work (chartered accountant). Walks four blocks. No nitrites.
14	M	40	29		Much enlargement of heart. Mitral regurgitation. Aortic stenosis and regurgitation.	Idle. Could not deliver gas at service station.	Digitalis	200 mgm.	Carried cement blocks four hours before pain recurred.
15	M	44	S.F. 2		Much enlargement of heart. Mitral stenosis and regurgitation. Aortic stenosis and regurgitation.	Idle.		200 mgm.	His family thinks he is able to return to his job, but the doctor forbids.

Case	Sex	Age	Age at first attack	Recurrence	Major signs and symptoms	Initial tolerance	Previous therapy	Present therapy*	Results
16	M	22	S.F. 13 R.F. 15		Slight enlargement of heart. Aortic regurgitation. B. P. 135/10 to 122/10. Pulse varied from 56 to 42. Faints when pulse is near 40. PR interval of .28 seconds.	Able to do pick and shovel job, but faints on arising in the morning.		150 mgm. and atropine Atropine and strychnine	Fainted more often after meals. B.P. 140/30 and pulse rose to 64. No more attacks of fainting. B.P. 140/40. Pulse 80. A-V block unchanged. Selling door to door.
17	M	62	?		Mitral regurgitation. Auricular fibrillation.	As a salesman could make only two to three calls per day. Unable to play the organ.	Testosterone Digitalis	300 mgm. 400 mgm.	Still fibrillating. Can play the organ. Does sales work nearly all day.
18	M	19	12	1 (in bed 1 year)	Mitral regurgitation and aortic stenosis. Slightly enlarged heart, Pulmonary edema. T waves in all E.C.G.'s inverted. S-T_2 depressed.	Has blackouts. Idle.	Digitalis	150 mgm.	Heart size decreased. All murmurs more quiet. Aortic thrill disappeared. No negative T wave. Only slight depression of S-T_2.
19	M	37	17	One	Gross cardiac enlargement. Liver enlarged. Mitral regurgitation. B.P. 140/100.	Can do only light housework.	Aminophylline. Phenobarbital	200 mgm.	Heart size decreased. "Does twice the work and not half as tired." B.P. 130/85. No edema.
20	F	27	6		Gross cardiac enlargement. Mitral stenosis and regurgitation. Pulmonary edema. T_3 and T_4 inverted.	In bed in congestive failure.	Rest Aminophylline. Digitalis. Phenobarbital	 150 mgm. 200 mgm.	Was out of bed for a year but could do no work. Still had pain and dyspnea. Heart size decreased. No dyspnea. Can do office work previously done by two girls with much stair climbing involved. T_3 and T_4 now positive.
21	F	68	54		Dyspnea. Marked left ventricular enlargement. Mitral regurgitation and stenosis. Aortic regurgitation. Depressed S-T_1, T_2 and T_4. Elevated S-T_3. T_1 and T_4 inverted. Ankle edema plus.	Can walk only two blocks. Uses two pillows.	Digitalis	300 mgm.	Shops four blocks away from home. No ankle edema. Cares for four boarders.
22	F	45	S.F. 10 R.F. 28		Marked cardiac enlargement. Mitral stenosis and regurgitation. Aortic regurgitation.	Can do only light housework with frequent pain.	Digitalis	400 mgm.	Still fibrillating. Does full housework.
23	M	22	7	One	Dyspnea. Mitral regurgitation.	Can do only office work.		250 mgm.	Feels normal. Can sell from house to house.
24	M	43	10		Mitral regurgitation. Enlarged heart. Legs mottled.	Can walk only fifty yards. Uses three pillows.	Digitalis	250 mgm. 350 mgm.	No help. Mottled color on legs fading. "Walks to back of farm and picks berries all day." Uses one pillow.
25	M	39	7		Mitral regurgitation. Marked cardiac enlargement. Auricular fibrillation. Cerebral embolism, 1941. Since then, spastic left arm.	Can do only office work.	Digitalis Quinidine	400 mgm.	Severe vomiting after dose of ephynal while on vacation. Local doctor took him off vitamin E and digitalized him. Mild failure ensued. Took same dose of vitamin E again and lost his edema. Still fibrillating. Feels stronger.

Case	Sex	Age	Age at first attack	Recurrence	Major signs and symptoms	Initial tolerance	Previous therapy	Present therapy*	Results
26	F	51	13		Left hemiplegia in 1941; a month later, right hemiplegia. Dyspnea. Ankle edema plus. Nocturnal pain. Moderate cardiac enlargement. Auricular fibrillation. Mitral stenosis and regurgitation. Aortic regurgitation.	Unable to walk ten feet.	Digitalis	400 mgm.	No ankle edema. Can do light housework. Still fibrillating.
27	M	41	10	Many, until 12	Palpitation. Marked cardiac enlargement. Auricular fibrillation. Mitral stenosis and regurgitation. Aortic regurgitation.	Has to sit in the office.	Digitalis	300 mgm.	No palpitation. Slightly reduced heart size. Still fibrillating. Feels much stronger.
28	M	36	10		Dyspnea. Ankle edema plus. Markedly enlarged heart. Mitral stenosis and regurgitation. Aortic regurgitation. Auricular fibrillation.	Needs five pillows.	Digitalis	300 mgm. mixed tocopherols	Less dyspnea in two weeks. Felt much stronger.
								250 mgm. same	Troubles recurred.
								400 mgm. acetate	No improvement in two weeks.
								400 mgm. mixed tocopherols	Steady improvement. Can climb stairs. No edema. Needs only two pillows. Slight dyspnea. Still fibrillating.

LEGEND

M—Male
F—Female
S.F.—Scarlet Fever
R.F.—Rheumatic Fever

*In this and in subsequent papers, an attempt has been made to express the dosage of vitamin E in terms of alpha-tocopherol. This is designed to facilitate clinical comparison between different preparations now on the market, since dosage is of fundamental importance in our treatment. Accordingly, any capsule containing "50 mgm. of natural mixed tocopherols" has been crudely equated to 25 mgm. of alpha-tocopherol. The only exception has been in the case of phytoferol, where the pharmaceutical house does this

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Acknowledgements

The writers wish to thank the Hoffman-La Roche Company for liberal supplies of the ephynal used in this study; British Drug Houses for the phytoferrol, oral and injectable; E. R. Squibb and Sons for tocopherex; the Harvey Laboratories for injectable alpha-tocopherol, and the Warren-Teed Products Company for large supplies of injectable alpha-tocopherol.

They also wish to emphasize the rôle Mr. Floyd R. Skelton has played in these purpura—heart researches. It would be hard to exaggerate his contribution.

287 Queens Avenue.

Artificial Eyes

The war department has recently announced that the army's plastic artificial eye has been adopted by the Veterans Administration in furnishing ocular prostheses to patients.

Developed in 1943 by a former major in the Army Dental Corps while stationed in England, this type of acrylic eye has practically replaced glass eyes which were used almost exclusively before World War II. The Army Medical Department developed this eye after the war broke out, when both civilian and military supplies of artificial eyes were depleted due to high breakage and inability to replenish supplies. The glass eyes then used in the United States, were largely German-made.

Credit for the development of the army's acrylic eye is accorded by Major General Norman T. Kirk, the Surgeon General, to Major Erpf, who initially introduced the eye. He returned to the United States from England in June of 1944, to collaborate with Major Milton S, Wirtz, Latimer, Ia., and Major Victor H. Dietz, Chicago, Ill., ocular prosthetic specialists in perfecting the acrylic eye at Valley Forge General Hospital, Phoenixville, Pa.

Editorials

Penicillin in Syphilis

At the San Francisco meeting of the American Medical Association on July 4, 1946, a symposium was held, where various authors discussed the uses of penicillin in early syphilis, neurosyphilis and congenital syphilis. The essays were published in the *J.A.M.A.*, January 4, 1947.

Dr. Sternberg of Los Angeles and Dr. Leifer of New York have analyzed the Army records of 1,400 men with early syphilis, who, prior to February 1, 1945, had received 2,400,000 units of penicillin, either in aqueous or isotonic solution of sodium chloride. According to the findings of other investigators, they also have seen no toxic reactions; therefore, all patients who began treatment were able to continue to completion. About 84 percent were observed for nine months or longer, following the end of treatment. Of six hundred men showing primary syphilis with negative tests of the blood, 94.3 percent had made "satisfactory progress". In a second group of 564 men having both primary and secondary syphilis, as determined by dark field and by blood sera tests, 89.9 percent were "satisfactory". The third group of 236 men with secondary syphilis, (presumably after the initial lesions had healed), 83.3 percent were relieved. The word "cure" does not occur in the summary. Following treatment (intervals not stated), the cerebrospinal fluid was taken from 719 patients. It was "normal" in 714, and "abnormal" in five, (0.69 percent).

This good showing in the total cases, about 90.6 percent, is admittedly "tentative", but it is attributed to early diagnosis and treatment in the chancre stage, and to the potency and purity of the penicillin used. The rate of "failure" is set down as five percent in 700 white men, and 15 percent in 610 negro men. After treatment, there were some reinfections in men who had been symptom-free; these were not regarded as the recurrence of the old condition, but as new contact infections.

Dr. Grant Morrow, University Hospital, Ann Arbor, Mich., in his discussion, described a condition in a man and wife, where the husband was positive while the wife was negative. Conditions were then reversed; the husband was negative and the wife was positive after the woman had, apparently, developed an intravaginal chancre. The U. S. Public Health Service has had many such instances, and has dubbed the condition "ping-pong syphilis."

Drs. Rose and Solomon, Boston, Mass., kept a record of one hundred cases, which had been diagnosed as "neurosyphilis", for twelve months or more. These patients were treated between February 1, 1944 and April 1, 1946; some 210 in all, are still being followed-up. There are tabulations of the examinations of spinal fluids, taken at least three months after treatment ceased. The plan followed, was to give a short-course, fever therapy plus penicillin, and to avoid any other antisyphilitic treatment. If further treatment was required, penicillin was administered in larger doses. A "course" comprised 3,000,000 units of penicillin given intramuscularly. The intervals between injections, and the number of units, varied according to the case at hand. Clinical results in one hundred patients showed sixty-two improved, thirty-five with no change, and three "worse"! Thirty-eight were retreated with penicillin. Following suspension of the treatment, both cell counts and total protein contents of the spinal fluid tended to become normal in from three to six to nine months. The strength of the Wassermann titer decreased more slowly; of one hundred patients who were recorded for over a year, eleven showed a negative Wassermann. This need for retreatment in something over a third of all cases which were followed for a year or more, is not encouraging. The conclusion is based on 3,000,000 units of penicillin, combined with short-fever therapy. This plan or "formula" is not the right one, obviously, and there is need for reconstruction. Again, we have before us the agelong question: When is syphilis cured? Nobody seems to know the exact answer. Presumably, when a patient is symptom-free and in apparent good health after repeated "physicals" carried out every few months, we can say that he is "clinically cured". Whether he is *absolutely cured*, is quite another matter. When watching the corkscrew parasites under the microscope, we may well conjure the notion that these enemies are capable of insinuating themselves so thoroughly into the body cells, and of lying dormant for months or years only to become reactivated for some unknown reason, and then bring about gummata in the brain or the spinal cord with *exitus letalis* in spite of all treatment of whatever kind, that we can indeed ask, "When is syphilis cured?" Certainly neurosyphilis is one of the forms to be most dreaded. The best we can say now in regard to penicillin in treating neurosyphilis, is that it works best in combination with malaria therapy, (fever type), better that is, than when either therapy is used alone.

Early congenital syphilis in this symposium was reported by Drs. Platou and Hill, New Orleans, La.; Dr. Ingraham, Philadelphia, Pa.; Dr. Goodwin, Baltimore, Md.; Drs. Wilkinson and Hansen, Galveston, Tex., and Dr. Heyman, Atlanta, Ga. Two hundred and fifty-two infants received "a single course of penicillin over a period of seven and one-half to fifteen days" and the results were said to be satisfactory in 73 percent; unsatisfactory in 9.1 percent; uncertainty was obtained in 17.9 percent. The dosage was set at 40,000 units per kilogram of body weight, and it is hinted that a larger dosage, given for longer periods, may be even more effective. To quote, "Judged by the outcome, all planned treatment schedules employing sodium penicillin alone, have been remarkably effective—and have amply demonstrated that this drug is the best single agent yet employed for treatment of congenital syphilis."

One would like to cry *amen* to this enthusiastic conclusion, but if we go back to the old books and essays on the treatment of congenital syphilis, we may doubt whether this claimed "advance" is very much beyond what our fathers accomplished with mercury and the iodides. It has ever been a truism in medicine, that much of the old that is still good has been forgotten, and that much of the new, now vaunted from the housetops, will also become forgotten and obsolete. In the words of Hippocrates, "Experience is fallacious and judgment difficult." It seems too bad to close this report on a sour note, but with penicillin as with many other great discoveries, and this is surely a great drug, the pendulum must at first swing widely and wildly until it starts to slow down to "a happy medium."

Does Poliomyelitis Follow Tonsillectomy?

In August 1943, *Circular Letter No.* 13 was sent to all physicians by the Connecticut State Department of Health. This circular seems to have stirred up a great deal of interest, not only among general practitioners but among ear, nose and throat specialists as well. Dr. Russell Roberts of Bridgeport, writing in the *Annals of Otology, Rhinology and Laryngology* (55: 3: 592, September, 1946,) quotes from the official communication: "As poliomyelitis sometimes develops after tonsillectomy, you may wish to delay any scheduled operation of this sort."

At the May 28, 1946 meeting of the American Laryngological, Rhinological and Otological Society in Chicago, Dr. Daniel S. Cunning of New York, initiated an inquiry into the "experiences" of other ORL specialists in this matter. The importance of trying to determine what relation a tonsil operation may possibly have to polio, became an "official question" of the society, and Dr. Cunning who is a surgeon in the Manhattan Eye, Ear and Throat Hospital, was authorized to distribute a questionnaire or adopt whatever means seemed best to secure the information. Two letters have been sent, either from Dr. Cunning's office, or from the American Laryngological, Rhinological and Otological Society. In a letter dated November 8th, the secretary, Dr. C. Stewart Nash of Rochester, emphasized the importance of securing answers from *all* tonsillectomists, and stated that "to date forty-seven percent of the members have responded". The data must be ready for the annual meeting, to be held in St. Louis, April 1947.

However, to again refer to Dr. Robert's abovementioned report, he states that, "Naturally no one would perform a tonsillectomy or any other nonemergency operation during an epidemic of any disease, and the proper attention should be paid to the apparent increase in the percentage of bulbar cases reported in post tonsillectomy patients." The summary of this article is interesting and important.

Two hundred and seventy-four cases of polio, occurring closely after tonsillectomy operations, have been reported during the past thirty-five years, and it is estimated that during this period 70,000,000 such operations were performed! A further estimate avers that 75 percent of this number, or 52,500,000, were performed on individuals under the age of eighteen, that is, during "the susceptible period." Again, it is asserted that "over half of these operations, approximately 24,000,000, were performed during the poliomyelitis months."

The deduction is, that if the reported 274 cases of polio had all occurred during these said months (which they did not), the incidence would be 1 case of polio after, or in, 100,000 recent tonsillectomies! In all walks of life, it is assumed that polio occurs in a ratio of 1 to 3250 of the population. These figures seem to prove that the annual incidence of polio in everyday life is thirty-one times greater than in recent tonsillectomy persons, even during the so-called "polio season."

The Trenton, N. J. quarantine in June 1944, which attempted to put all children under sixteen years of age in isolation, stirred *The Bridgeport Telegram* to publish an editorial entitled, "Polio Is Overplayed". The danger of encouraging mass hysteria in women's clubs, parent-teachers and visiting-nurses gatherings, is obvious. It is well to emphasize that children become crippled with "rheumatism" and other systemic diseases, perhaps even die from the neglect or nonremoval of adenoids and

tonsils. After many years of observation, this writer thinks it surprising that, considering that tonsillectomies are performed by nearly every licensed M.D. at some time in his career, the results are so excellent! Postoperative infections of whatever kind are seemingly more numerous in other fields of surgery, and in the absence of methods of prevention, we may call them "accidental."

Dr. Cunning thinks that data in this controversy can be quite readily secured from municipal and state organizations which, of course, have statistical information of this sort on hand. This might be even more accurate than the "report" of any individual operator's experience, since the specialist is not likely to see, or even hear about what happens to a dismissed, healed case.

Since we are not agreed upon the portal of entry of the polio virus into the system, it is not quite fair to assume that it may enter an open wound in the throat more readily than an open wound elsewhere. In fact the "enemy" may possibly be swallowed with food or drink; possibly it may be caught anywhere along the food or breath tract, in the absence of any "open wound" whatever.

Over a seven-year period at The Manhattan Eye, Ear and Throat Hospital, 11,204 charts were referred to, and only 4 instances of polio were brought to light. None of these was of the bulbar type. Dr. John R. Page received replies from 8,915 patients who had been tonsillectomy cases during the years 1937, 1939 and 1941, when the polio incidence was thought to be higher than usual, but in all these replies, only one case was reported!

However, since almost anything can be proven by statistics, it is well to obtain the figures from as many varying sources as possible. One may then strike an average and be in better position to determine the facts, than if only one source of information is considered. We shall look forward with interest to the published report of the data now being gathered by this ear, nose and throat organization.

Iritis in Rheumatic Affections

In the *British Medical Journal,* April 20, 1946, Arnold Sorsby, M.D., research professor in ophthalmology, Royal College of Surgeons and Royal Eye Hospital, London; and A. Gormaz, M.D., assistant clinica oftalmología, Salvador Hospital, Santiago, Chile, gave their views on iritis in rheumatic affections. The authors are somewhat skeptical in regard to any connection between gout and iritis, although they are open to conviction on a phase which has not been gauged in all its details. Also, they hold that whether gout has disappeared or has been forgotten, is a matter of opinion. The situation appears to be that gout, as known and described by Sydenham, and as described in the days of Pitt and Foxe, when those who could afford to do so indulged in port wine, has disappeared, or seldom occurs. As for gouty iritis, the occurrence of which our medical forefathers, in Britain especially, believed in strongly; Drs. Sorsby and Gormaz are somewhat critical in regard to its appearance, even in acute attacks of gout. However, as the question is unsettled, they rightly give no decided opinion.

In a summary of their findings, they state that iritis was observed three times in a series of one hundred and twenty-three patients with osteoarthritis, three times in fifty-three patients with ankylosing spondylitis and fifteen times in three hundred and twenty-two patients with rheumatoid arthritis. No cases of iritis were seen in three hundred and thirteen patients suffering from various other forms of rheumatic disease. The authors state, that assessed against a control series, the finding as regards osteoarthritis is not significant, while that relating to rheumatoid arthritis is highly significant.

However, a review of the literature shows little appreciation of the frequency of iritis in rheumatoid arthritis. On the other hand, the occurrence of iritis in ankylosing spondylitis is well established. That iritis may be a pointing sign in ankylosing spondylitis, was suggested by one case in the authors' series and two similar observations noted in literature. Iritis in rheumatic fever seems to be rare. In gout, no cases of iritis were observed in the authors' series, and none were noted in several recent surveys of large numbers of gouty patients, but there seems to be no reason to doubt the validity of gouty iritis as a clinical entity. Iritis, like rheumatoid arthritis, is regarded as an inflammatory reaction. Since neither organisms nor pus are normally recovered from both the inflamed eye and the rheumatic joints, both these inflammatory reactions have been ascribed to indirect bacterial activity, as well as to a whole series of nonbacterial exciting factors. The authors conclude that there is undoubtedly some parallelism in the reaction of the eye and the joint to a noxious agent. The problem of intra occular inflammation is similar to that of inflammation of the joint.

The problem of the exact connection between rheumatic affections and iritis is obscure; at any rate, not clear. That there is a noxious connection in some of the rheumatic affections is obvious, but its nature remains problematic, although suggestive.

A MEDICAL OFFICE IN THE HOME

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The question of a home vs. a business block for the office of a physician, has long been a controversial problem. The author's solution of the problem may serve as a suggestion in answering the perplexing question; he offers it merely as one solution.

When the writer began the practice of medicine nearly a quarter of a century ago, he found himself confronted with a seemingly impossible situation. It appeared necessary that his office should be in his home, and the only available rooms were two on the second floor at the far end of the house. His office furniture consisted chiefly of the accumulation of college days—a flat top, black walnut desk, a swivel chair, a Morris chair, sectional book cases and some "shining" white enamel cabinets. He might have taken an office down town in a business block, but fortunately he realized that what seemed a liability had real possibilities. Thus, the transformation of what he already possessed marked the beginning of a new medical suite. At the outset he realized that the consideration of seemingly minor details was of the utmost importance. Life is made up of a multiplicity of details, and thus the accumulation of these make the whole; this he found to be eminently true in his particular situation, and he determined that his entire treatment should be based on the idea of keeping the suite antique.

Inasmuch as the offices were to be on the second floor, the patients entered through a large, commodious reception hall, already furnished in antiques, with a gate-leg table and Hepplewhite shield back chairs. The patients were not to wait here, but were to immediately go upstairs to the waiting room.

Waiting Room.—The upstairs hall was about ten by twenty feet in size. By closing two or three doors a most convenient waiting room was produced. On one side was a railing, forming something of a balcony overlooking the winding stairs, where half way down the landing was a massive vine-covered window, which looked toward the street. The furniture consisted of a colonial sofa, a windsor chair, a Hoadley grandfather's clock and primitive literature table, the plan being to keep the entire suite antique.

From this waiting room leading to the office was a long corridor. This again seemed a liability, but not so. The distance gave a sense of quiet and seclusion to the office and was removed from any confusion in the waiting room. As this corridor neared the offices, it made a sharp, right angle turn toward a window, and this was converted into a nurse's office.

Nurse's Office.—The nurse's office was removed from the waiting room but was accessible to the offices. Here, in a mahogany secretary with linen-fold doors were the nurse's supplies, and by the window the typewriter table. A buzzer over the typewriter announced the patients as they entered the front vestibule. Consultations being by appointment, the nurse knew fairly well who had come in before they entered the waiting room. A door from the nurse's office admitted the patient to the consultation room.

Consultation Room.—Here we had taken special pains to avoid every suggestion of a medical office. We strove to create an atmosphere that would reassure and put at ease the most fastidious of new patients. There was no suggestion of haste or case mechanism, and no signs of confusion anywhere. The first step was to remove the wall paper and paint the walls colonial ivory, thus providing a suitable background for the decorations. Three sides of the room were then fitted with mahogany book shelves, reaching from the floor to less than a foot from the ceiling. These were stocked with books, by no means all medical, and it provided a suitable place at the top for antique ornaments. An old mahogany Governor Winthrop desk stood in the corner and the telephone stand was made from a mahogany sewing table. A Boston rocker and several Windsor chairs made for the patient's comfort. The ugly center chandelier was removed and in its place antique wall lights were substituted. There were no medical pictures or diplomas on the walls; instead there was an ancestral oil portrait, a large Greek Ikon (*cerca* 300 years old), colonial water colors, a copy of the *Vigil* by R. A. Pettie, an 1818 sampler and some Godeas. Considerable attention was paid to the fireplace and mantle; in a sense this was, as it should have been, the center of interest and of comfort. To accentuate the antique atmosphere, there was an old crane and pot hooks, a Revolutionary War rifle, a Civil War canteen, and of course, the Farmers Almanac. On the mantle, as in all old houses, we had a portrait of General and Lady Washington, a few daugerrotypes and silhouettes. The filing cabinet for case histories was covered with a Paisley shawl. We then took particular pains to see that the color scheme of the desk, utensils and ornaments did not clash with the window draperies; in fact, this room might have been a quiet library or study. A door from the consultation rooms led to the examination and treatment room.

Examination and Treatment Room.—The prevailing types of furniture in this room were old pine. An old bookcase, that had been painted many colors, was scraped and restored to its original soft pine and used as an instrument cabinet. To protect the pine shelves against abuse, the upper surfaces were finished with valspar. A slant top desk restored to a lovely, soft, old pine finish concealed the drugs and solutions. From a dressing table, we removed the ugly, top mirror and legs and scraped off the paint, which left a pleasant pine surface. This was used for diagnostic instruments and gynecological supplies. A plate glass top protected the finish, and yet revealed the fine grain of the wood. There were, of course, in addition, the medical examining table and chair, the sterilizer and the basal metabolism

unit. As was the case in the consultation room, we finished the walls in colonial ivory. There were no distressing medical pictures on the walls, but here one did find the academic and medical diplomas, and the certificates of medical society memberships. Between two closets, in opposite corners, was an alcove with a window which served as a dressing room.

Dressing Room.—The dressing room was screened off, not with a stiff white hospital curtain, but with a three panneled pine screen, and was furnished with a dressing table, an old lamp, wired for electricity, and an antique mirror. One of the closets, with the addition of several shelves was utilized for medical supplies and dressings. The other served as the laboratory.

Laboratory.—Although not large, the laboratory was equipped with running water and whatever else was needed for the routine laboratory diagnostic work of a doctor's practice. The office nurse was also trained as a laboratory technician and secretary, and her pleasant, dignified manner completed the atmosphere we strove for.

Conclusion

The author is well aware of the fact that much of the above narrative has to do with seemingly minor details, and yet it cannot be denied that these details are essentials in the work we strive for. What was done by the author may very well be done by any physician inclined to do so. The many compliments of the patients and of the detail men that frequent the office, reassure the writer that what he felt was a liability, was unmistakably an asset. We strove for simplicity and detail. As Ruskin might have said in his *Seven Lamps of Architecture,* we achieved "sincerity in art," and this should reflect the sincerity of one's practice.

16 Broadway.

Gastragogue Effect of Laxatives and Allyl-Bromide Mixture

Defining a gastragogue as a substance that aids in emptying the stomach of its contents, Dr. Henry M. Feinblatt and Dr. Edgar A. Ferguson Jr., reported their clinical and roentgenographical study of the allyl-bromide mixture consisting of all the natural products of bromination of garlic, in the December 1946 issue of the *American Journal of Digestive Diseases,* p. 386. The allyl-bromide mixture was demonstrated to be a useful agent in stimulating gastric motility and physiological emptying of the stomach which shows retention. The gastragogue effect was associated with the subjective relief of symptoms. When allium sativum is brominated, the resulting allyl-bromide mixture shows the clinical action of a carminative. Gastric analysis on rats showed definite evidence of gastric stimulation. The laxative drugs studied did not increase stomach motility or secretion.

MEDICAL ESSAY

Multiple Sclerosis and Ecstasy

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A few months ago a new movement was born in American medical life in order to intensely study multiple sclerosis and help the victims of this disease with greater knowledge than is obtainable at present. It is said that there are probably as many patients suffering from this affliction than there are cases of poliomyelitis.

Anatomically, it is a slow, insidious, gradual destruction of many portions of the central nervous system. For the British school it is "disseminated sclerosis"; the French call it *sclérose en* (in the shape of) *plaques,* which is even a more descriptive name. Indeed, when advanced, it shows many, irregularly distributed patches of induration, comparable, more or less, to flat plates. The latter are due, like in all sclerotic cases, to a hardening of the tissues, in this case it is the nervous tissues, perhaps resulting from some inflammatory process although the real cause is as yet unknown. New cells and fibers, more numerous than the original, normal, elements which they replace, become more crowded in the same space and build up a denser tissue which smothers the activity of the respective portions. However, this pathology has been disputed lately, and even the term "sclerosis" is partly regarded as a misnomer by some neurologists.

The all-over effect is a number of disabling symptoms: various forms of paralysis and motor disturbances, nystagmus, visual and speech changes, incontinence of urine and feces and other troubles, the gravity of which depends upon the seat of the lesions.

The disease, which usually occurs in persons between twenty and thirty years of age, may be self-limited, and the patients may then escape with comparatively minor disorders. On the other hand, it is often inexorably progressive tormenting the victim for several years and finally ends in death. No treatment, so far, has shown any worthwhile outcome.

The great misfortune is that the patient's intelligence and mentality is not always impaired, and he may watch himself with full consciousness and terror, disappear from the scene step by step. There can be no deeper tragedy. In a good many cases, one of the prevailing symptoms is euphoria, a frequently exaggerated optimism and a feeling of well-being entirely out of proportion with the severe deteriorating factors. Sometimes, in highly cultured individuals and people of powerful characters, it is difficult to distinguish this mental state from a real, inborn, optimistic temperament or a superior philosophy about life.

Twenty years ago, a young man of twenty-three, came to the office with vague complaints, which he thought were those of pulmonary tuberculosis, be-

cause his mother had died from that illness. The author could not concur with that diagnosis and made no other. As the patient was a student of mathematics at the University of Paris, he had consulted some physicians there, and had later gone on his own initiative to the Alps for his vacation. Although some neurological symptoms appeared in the picture, no specialist was able to determine what the case was. It seemed that the famous Babinski also dismissed him with no definite reply, however, the patient made his own diagnosis again, this time correctly. He was sure that he was suffering from multiple sclerosis. Bringing to the writer all the letters from the doctors and the prescriptions which were kept in meticulous order, (*"les malades aux petits papiers"*), the young man, with his eloquent insistence, gave the impression of an outspoken neurotic. In spite of that, the author could not but help agree with him that the case, at that early stage, vaguely but convincingly resembled multiple sclerosis. He was then sent on to other men for further diagnosis, and in due course of time, when there could be no doubt about it, he was "treated", or rather nursed, for this disease. Soon, there appeared among his symptoms, cutaneous phenomena, thermic irritations, a difficult gait, sensations "like electric shocks", a tremor in one hand, an impossibility to write or to play the piano, vertigo, diplopia and nausea. He was not under the author's care, but we managed to keep informed and from a distance followed the patient's sad calvary for fifteen years, until his death.

This patient had distinguished himself brilliantly as a mathematician and had looked forward to a splendid future when this cruel illness interrupted his studies, but during his disease he showed a wonderful constancy and unflinching faith in life.

He united within himself both extremes, that of Job and that of a wellknown crippled statesman, without the religiosity of the former or the energy of the latter.

Nine years ago, the author sent a letter to the editor of *The New York State Journal of Medicine* which was written by the now advanced multiple sclerosis sufferer and it was published in 1937. The stricken man was interested in his fellow invalids who were mute "like myself and can no longer write or typewrite, but are still able to use the muscles which render *winking* possible".

"As for myself" he said, "being unable to tolerate light, I live in a darkened room with my eyes almost constantly shut. I am unable to open them voluntarily if they remain shut for a very few seconds. However, if some extraneous force opens them, I can very easily dictate my thoughts by certain winkings which I shall explain further on in this letter. Hoping to be of service to other mute individuals, I am dictating this *compte rendu*. I give the number representing its order in the alphabet. At first I used to indicate these numbers by means of the fingers, but the condition of my arms soon prevented me from continuing that method. Such numbers can most easily be evinced, however, by adding the numbers expressed by means of these workings. Every simple winking of both eyes indicates ten; the left eye stands for five; each winking of the right eye for one."

And he continued explaining his method.

Describing his "abortive life", he wrote in another of his letters, "My disease has successively rendered me an invalid, put me definitely to bed, made me mute and, lastly, prevented me from drinking, because of troubles of deglutition, which are due to what is medically called 'bulbar paralysis' ".

As a mathematician he had worked on such problems as integral equations, figures of equilibrium of a rotating fluid, relativistic celestial mechanics, etc., but the only study published in the form of a lengthy article was his *Ecstasy*, printed in *The American Scholar* during the later years of his illness, when, as he said, he expected "to die shortly".

His infirmity had carried him down the abyss of distress, but at the same time had created an unusually exalted state of thinking. He was still a hero remaining high above physical affliction.

Just as Helen Keller *sees* many more things, has more distant vision and draws more correct conclusions than the average person with good sight, so this patient was able to elevate himself in his solitary existence, cut off as he was from the world of his senses.

To give an idea of his fortitude and mental beauty, a few sentences from that essay is herewith quoted:

"We are all conscious of an external universe existing independently of our ego, and fully realize that our perception of that reality is essentially relative to the means we possess of coming in contact with it—that is, relative to our senses. When, after a long period of groping, we become able to coordinate the innumerable impressions external stimuli determine in us; when that extensive series of rudimentary experiments, so fundamental for our subsequent psychological evolution, has transformed for us the external chaos into a coherent and harmonious whole; when at last we become fully conscious of the existence of an external universe, we realize that our subjective representation of any concrete reality is fundamentally dependent on the contingencies of our physico-psychological evolution. We ordinarily seem to forget or disregard the fact that our perception of the universe might have been essentially other than the one we happen to have, had surrounding conditions been extremely different and had we consequently evolved in a totally different yet possible manner. Everything in our daily routine prevents us from attaining the lofty regions of contemplative life where all our conceptions fuse into a weird sense of irremediable inaccessibility; we must, indeed, attend to our daily occupations, this being intimately related to our very means of existence. Even while pursuing theoretical or experimental researches we necessarily have to remain in *our daily world*, for it is the only one in which we may discover truths corresponding in some way to objective reality. We are enchained, and our chains are short and heavy. In recent years our notions of time and space have been carefully analyzed. It has been

found that they are intimately interrelated, time considered independently of space, and space independently of time losing all physical significance. It is evident that although they still reflect nature's beautiful harmony and have a direct correspondence with objective reality, our perceptions only constitute a grossly deformed picture of that reality. Whenever we fully realize the extreme insufficiency of our perception of the universe, we become *superconscious*. That our persistent endeavor to attain something of the absolute must forever remain futile, is the tragedy of our spiritual life. When for one reason or another, we have temporarily been deeply immersed in our everyday world and are then at last left in solitary contemplation, we cannot help but feel the abrupt contrast in our corresponding psychological states. Music is the supreme factor among those which may help us to loosen our heavy chains for a moment—music of a sublime and heavenly nature, of a type admitting of no terrestrial interpretation but transporting us into regions which ordinarily speech cannot portray. What can better make us feel the anguish of the infinite, of a universe whose origin or end we cannot comprehend; what can more effectively transform our whole psychic self, than some entrancing musical composition? We thus prepare ourselves for a moment of *ecstasy* and become ready to enter a state of trance that will momentarily submerge our relative perception and leave only a desolate consciousness of the existence of an exterior reality. In the darkness of night let us think of that omnipresent universe so unlike the one we perceive, so unimaginable, so much transcending what our mind and senses can offer us to meditate upon."

65 West 95th Street.

Hospital Chest Survey Unit

A new hospital chest survey apparatus has recently been announced by The North American Philips Company, Inc., New York, N. Y.

This hospital chest survey unit is the first of its kind specifically designed for hospital use, and it satisfactorily accommodates either ambulant or stretcher patients.

The new unit can be operated from any existing x ray generator simply by coupling it to the hospital chest survey controller. Very little space is required by the novel wall-mounted design, and this is important where hospital admitting departments are small.

With finger-tip ease, the hood, camera and tube assembly, swings almost instantly, on a horizontal axis to accommodate patients in either standing or prone positions; a specially constructed stretcher is used for nonambulant cases.

For some time, the need for routine chest x rays has been apparent for all incoming hospital patients. The Philips unit was designed for this purpose and it was exhibited for the first time in Cleveland on November 11, 1946, in connection with the seventy-ninth convention of the American Public Health Association.

News Items

Edward N. Gibbs Memorial Prize.—It has been announced by The New York Academy of Medicine that a sum of $1,500 is available during 1947, under the Edward N. Gibbs Memorial Prize, for original research in diseases of the kidney.

Candidates must be physicians, who have been graduated at least three years and are residents of the United States. Candidates should submit evidence of research already performed and of facilities to prosecute research upon the causation, pathology and new methods of treatment of diseases of the kidney.

Applications, with the required evidence, should be addressed to The Gibbs Prize Committee at The New York Academy of Medicine, 2 E. 103rd Street, prior to March 31st.

Friday Afternoon Lectures.—During the months of March and April, the following lectures in the twenty-first series of Friday Afternoon Lectures will be given at the New York Academy of Medicine:

March 21: Critical evaluation of the uses and dangers of transfusions, by Dr. John Scudder, assistant professor of surgery, College of Physicians and Surgeons, Columbia University; assistant attending surgeon to the Presbyterian Hospital and Vanderbilt Clinic;

March 28: Recent advances in the treatment of lymphomas and leukemias, by Dr. Lloyd F. Craver, physician, The Memorial Hospital;

April 11: Back pain of nervous origin, by Dr. John Edwin Scarff, assistant clinical professor of neurosurgery, Columbia University, College of Physicians and Surgeons, and;

April 18: Back pain of psychosomatic origin, by Dr. Henry H. Jordan, associate orthopedic surgeon, Lenox Hill Hospital.

Venereal Control Council.—The war department has recently announced the establishment of a Venereal Disease Control Council for the purpose of insuring that all possible control measures are employed and to reduce the rate of venereal disease in the army.

The council will meet each month to consider venereal disease problems as they affect service personnel, develop standard educational and control measures and review control procedures adopted in the field. In addition, the council is authorized to take immediate corrective action when reports indicate the existence of unsatisfactory conditions that are beyond the control of the local or army commander, and to establish the policy for the reduction and control of venereal diseases, based on appropriate research studies, surveys and field experience. It will also coordinate and assist the Joint Army and Navy Disciplinary Control Board on disciplinary problems related to venereal disease control.

National Tuberculosis Association.—The forty-third annual meeting of the National Tuberculosis Association will be held in San Francisco, June 17-20, 1947, according to the January issue of the *National Tuberculosis Association Bulletin.* Program arrangements are in the hands of the following committees: Medical section—Dr. John H. Skavlem, chairman; Dr. Emil Bogen, Dr. Donald S. King, Dr. Herbert C. Maier, Dr. Eugene P. Pendergrass, Dr. Sidney J. Shipman, and Dr. Max Pinner, ex-officio. Public health section—Glenn V. Armstrong, chairman; Alfred E. Kessler, Donald E. Pratt, and Miss Beryl Roberts.

A preliminary program of the meeting will appear in the April *Bulletin* of the National Tuberculosis Association.

N. Y. State Seeks Psychiatrists and Psychologists.—The state of New York, aiming to expand its treatment, training and research services in its mental health, child guidance and delinquency prevention programs, has afforded additional opportunities for professional workers in these fields who are residents of New York State. Examinations, to be held March 22nd, were recently announced by the State Department of Civil Service. Complete information on duties, qualifications and the mechanism of applying for an examination may be obtained by writing to The State Department of Civil Service, Albany, New York. Applicants must enclose a long, self-addressed envelope bearing six cents in postage, and they must specify the titles and the numbers of positions in which they are interested. These positions are as follows: Senior research psychiatrist, No. 4359; assistant research psychiatrist, No. 4332; senior psychologist, No. 4358; junior psychologist, No. 4352.

Fellowships in Health Education. — Fellowships leading to a Master's Degree in Public Health in the field of health education are being offered to any qualified United States citizen between the ages of twenty-two and forty, according to a statement released recently by the United States Public Health Service, Federal Security Agency. Tuition, travel expenses for field training and a stipend of $100 a month will be provided out of funds furnished by the National Foundation for Infantile Paralysis.

The year's training, which begins with the 1947 fall term, consists of eight or nine months' academic work and includes: public health administration, epidemiology, public health and school health education, problems in health education community organization and information techniques, and three months of supervised field experience in community health education activities.

Application blanks may be obtained by writing to the surgeon general, United States Public Health Service, Washington 25, D.C., and they must be filed prior to March 15, 1947.

Clinical Society of Reconstruction Hospital.—The Clinical Society of Reconstruction Hospital will hold a meeting, Wednesday evening, March 19, 1947, at Central Park West and one hundredth street, at 8:30 p.m. The topic of the evening will be on the "Newer concepts in the therapy of pain", by Dr. E. A. Rovenstein, professor of anesthesiology, New York University College of Medicine, and director of anesthesia, Bellevue Hospital, New York. The discussion will be opened by Dr. Milton C. Peterson, director of anesthesia, New York Postgraduate Medical School and Hospital, and Dr. David J. Graubard. Dr. David Goldblatt will preside as chairman of the meeting.

Fellowship Awards.—In accordance with the previous announcement of the creation of the Rosenstock Memorial Foundation Fellowships, the foundation received in 1946, a number of applications which were turned over to the Medical Advisory Committee for study, and based upon these applications, together with reports of the several members of the Medical Advisory Committee, three awards have been granted at this time to: Dr. Doris J. W. Escher, Montefiore Hospital, New York, N.Y.; Dr. Raymond S. Megibow, Mt. Sinai Hospital, New York, N.Y., and Dr. Alan Erslev, Memorial Hospital, New York, N.Y., who are undertaking research studies in edema, hypertension and leukemia, respectively.

Fellowships for Physicians.—Surgeon General Thomas Parran, U. S. Public Health Service, has announced that applications for fellowships in postgraduate public health training for physicians, for the school year beginning in the fall of 1947, will be received at any time prior to May 1, 1947.

The fellowships are made possible by a grant of $228,400 from the National Foundation for Infantile Paralysis through funds contributed to its March of Dimes. Fifty-three students were awarded fellowships for the school year beginning in September 1946.

The fellowships provide an academic year's graduate training of approximately nine months in an accredited school of public health followed by three months of field training, and are open to men and women, citizens of the United States, under forty-five years of age. Physician applicants must have completed at least a year's interneship. The fellowships are administered by the committee on training of public health personnel, which consists of representatives of schools of public health, the state and territorial health officers, the American Public Health Association and the U. S. Public Health Service.

Applicants for fellowships may secure further details by writing to the surgeon general, U. S. Public Health Service, Nineteenth and Constitution Avenue, N.W., Washington 25, D.C., Attention, Public Health Training.

Personal.—The appointment of three scientists to the staff of the Sterling-Winthrop Research Institute has been announced as follows: Dr. Frederic C. Nachod has been appointed as the senior research chemist to the department of physical chemistry; Dr. Froilan P. Luduena, as the senior pharmacologist, and Kenneth D. Fleischer, B.S., M.S., as senior chemist in the microanalytical laboratory.

Dr. Nachod replaces Dr. G. W. Ewing, who resigned to become the assistant professor of chemistry at Union University, Schenectady, N.Y.

Colonel Wesley C. Cox, M.C., regular army medical officer since 1917, has been appointed the new chief of the Army Industrial Hygiene Laboratory at Edgewood Arsenal, Md., with offices in the Surgeon General's Office.

Major General Norman T. Kirk, the Surgeon General, recently was awarded the Legion of Merit for his services as the commanding officer of Percy Jones General Hospital during 1942 and 1943. The presentation was made at the Pentagon Building by Major General Henry S. Aurand, commanding general of the former sixth service command during that time, and now director of research and development, War Department General Staff. During the time for which he was cited, General Kirk was a Brigadier General at the Battle Creek, Mich., installation.

Mr. Francis C. Brown, president of the Schering Corporation, Bloomfield, N.J., has announced the recent appointment of Mr. Basil O'Connor as a new member of the Schering board of directors. Mr. O'Connor is chairman of the American National Red Cross and president of the National Foundation for Infantile Paralysis.

Dr. Morton L. Levin, director of the department's division of cancer control, was elected president of the Public Health Cancer Association at its annual meeting in Cleveland, Ohio. Doctor Levin was chosen to head the association after two years as secretary-treasurer. He succeeds Dr. Herbert L. Lombard, director of the division of cancer and other chronic diseases, Massachusetts Department of Public Health.

Dr. Eugene L. Jackson, former chairman of the department of pharmacology, Emory University School of Medicine, Atlanta, Ga., has joined the staff of the A. H. Robins Company, Richmond, Va., as medical director in charge of research.

Dr. Walter H. C. Laves has been appointed deputy director-general of the United Nations Educational, Scientific and Cultural Organization. The appointment was made by the standing committee of the executive board of UNESCO. Dr. Laves, administrative consultant on international affairs in the bureau of the budget, served as an adviser to the American delegation to the general conference to UNESCO, held in Paris November 19th to December 10, 1946.

Letter From Britain

(From Our Own Correspondent)

There still is a somewhat troubled state of affairs in this country. The situation may be compared to a person who is recovering from an acute illness, in which for sometime it was impossible to say which way the issue would turn out. However, the crisis past, the convalescence stage set in, but after such a life or death struggle, the regaining of normality, physically and mentally is not easy but slow and tedious. To tell the truth, it may be a long time before sanity comes and things will be as they were, to some extent at any rate. The political and financial outlook in this material condition of convalescence is disturbing, to put it mildly. The reaction is, perhaps, worse than might have been anticipated. The country is in an unsettled state from one end to the other, and it seems that there are few signs of healthy rehabilitation. The medical profession shares with the other professions and trades in this general upset of long-held views. That there will be radical changes in the conduct of medical practice, is plainly evident; however, we must wait and see and hope for the best. Probably, as is often the case in Britain, there will be a wise compromise in which each will give and take to the benefit of the community at large.

New Bodleian Library at Oxford

The Bodleian Library at Oxford is among the oldest and most important libraries in Britain and has an international reputation. Its books and pamphlets, etc., are now housed in a new building, which on October 24th, was opened in the presence of the King and Queen; Lord Halifax; the Chancellor of the University of Oxford; Sir Gilbert Scott, the architect of the new building and a distinguished gathering. It is built in the modern style, utilitarian to the last degree, but not everyone likes the outside which does not fit in altogether with the neighbouring buildings. It is extremely efficient and its solid unpretentiousness grows on one; or perhaps, one becomes accustomed to it and unobservant of its characteristic architectural modernity.

Centenary of the Discovery of Anesthesia

On October 30, 1946, the Princess Royal unveiled at the Royal College of Surgeons, London, a memorial tablet with the following inscription: "This tablet was erected at the Royal College of Surgeons of England and the association of anesthetists of Great Britain and Ireland, to mark the centenary of the first operation under anesthesia in this country and to keep the memory of four British pioneers whose names will be held in honor from generation to generation, Henry Hill Hickman, James Young Simpson, John Snow and Thomas Clover."

Shortage of Rubber Gloves for Surgeons

It is very difficult to obtain rubber gloves for operating purposes and the use of bare hands has been resumed.

Christian Science Nurses

There is some difference of opinion as to the status of nurses trained in Christian Science methods. It seems that in this country, such nurses are not taught the medical side of nursing, but in general training and hygiene. Their training is not far different from that of nurses trained in the usual way. However, this question is still not settled and is being debated at present.

Eye Affections in Industry

Acute or chronic conjunctivitis, or keratitis, may and has, more or less frequently, an occupational etiology. Cases of retinitis may be due to chronic poisoning from industrial solvents. Workers in the glass industry often suffer from changes in the lens. The working conditions of a patient suffering from an eye disease or affection should be inquired into, and the establishment of departments of industrial ophthalmology is highly desirable.

Rheumatic Research Centers in Britain

Rheumatism, in its many and various forms, flourishes exceedingly in Britain. Fibrositis may be termed as the British disease, and is the worst foe to industry, not so much because of its menace to life, but of its menace to health and consequently to industry. The figures showing the time lost in certain trades because of fibrositis and other forms of rheumatism are almost appalling. The British Ministry of Health's medical and advisory committee, recommended that a number of diagnostic and research centers should be established for the study of chronic rheumatism and for the improvement of diagnosis and treatment. Also, that such special centers should be situated in university medical schools and teaching hospitals. To further this scheme, the Nuffield Foundation has made a grant of $500,000, over a period of ten years, towards the establishment of a center of this description in the University of Manchester. The scheme will be carried out thoroughly, as Manchester and the surrounding district are among one of the most suitable localities for the prosecution of one of these centers. Manchester stands in the midst of a densely populated industrial region, where the climate is changeable, generally chilly, smoky and dusty, which, of course, is favorable for contracting rheumatism. At this center, the work will cover two main fields; the clinical, sociological and the fundamental study of the rheumatic process. The social aspects of rheumatism and its industrial implications will be studied in cooperation with the Manchester University department of industrial health. This is the second scheme recently started in Britain to study rheumatism. A short time ago the British Legion set up a fifty bed rheumatism research and treatment center at Fairfield Hospital, near Letchworth, a garden city some twenty miles from London. This center is closely linked with the Royal Free, the parent hospital in London, where women are trained in medicine and surgery. Some years ago a fully illustrated description of the hospital was published in the MEDICAL RECORD.

Book Reviews

Practice of Medicine

An Integrated Practice of Medicine. A Complete General Practice of Medicine from Differential Diagnosis by Presenting Symptoms to Specific Management of the Patient. By HAROLD THOMAS HYMAN, M.D. Volumes I, II, III, IV and Index. 1184 illustrations, 305 in color, and 319 differential diagnostic tables. Philadelphia and London: W. B. Saunders Co., 1947. Pp. 4336. Price $50.00 per set.

It is possible that someone who reads this review has never heard of Harold Thomas Hyman, M.D. Quite contrary to common practice, no mention is made on the title page of "other degrees", hospital appointments, membership in learned societies, etc., which usually require several lines of print in almost all medical texts. This looks like an intentional omission, and if Dr. Hyman wishes to hide his light under a bushel, who shall complain? He is, however, by no means an obscure man working by gaslight, perhaps, in a dingy laboratory amid the cobwebs, as is the wont of literary and stage doctors. In fact, and the fact comes from a medical *who's who*, he is a Park Avenue, New York physician; a graduate of the New York College of Physicians and Surgeons, Columbia University, class of 1917; an alumnus of The Mt. Sinai Hospital; an associate physician to the aforesaid and a consulting physician to The Monmouth Memorial Hospital in New Jersey. Apparently, he wishes this magnum opus to speak for him, and it does so in a thousand tongues!

As the descriptive literature states, this is not merely a new work, but a *new kind of work*. In fact, it is utterly different from anything this reviewer has ever seen or heard of. To be sure, there have been "systems of medicine" ever since Hippocrates, many of them written by outstanding men, but here we have an entirely different "approach", a plan of presentation which is almost staggering in its comprehensiveness and amount of detail. The plan, in brief, as set down by the author is based on "cardinal objectives", which include (1), complete delineation of the broad and diverse fields of general practice; (2), arrangement of material in the chronological sequence of everyday practice; and (3), integration of the various subjects so that each discussion focuses consideration of the human patient as a *biologic unity*. The aim is to "cog together all the factors—the specialties, internal medicine, surgery, diagnostics and therapeutics—that go to make up the practice of medicine." This integration emphasizes the doctor-patient relationship, that is, it undertakes to make a comprehensive study not only of the patient himself as an individual, but of his family, surroundings, habits, mental attitudes and general welfare—a complete "overlook", so that nothing which concerns the patient shall be unknown or foreign to his medical mentor. A large order indeed, and one which few colleagues would truthfully be able to say, "Why I have done that all of my professional life." The intention is in us no doubt, but have we had a plan of action so that nothing has been missed?

The divisions or sections of the work are grouped as follows: I. Bodily Injuries and Bodily Responses to Injury. The subheads are: General reactions of bodily tissues, infection, allergy, neoplasms, disturbances of metabolism, and poisoning. II. Disturbances of the systems of communication and coordination, under which the author deals with the circulatory system, blood and blood-forming organs, organs of internal secretion, the voluntary and involuntary nervous systems, including psychiatry, and the eye. III. Disturbances of the End Organ Systems, which concerns the digestive, respiratory, urinary, male and female reproductive, skeletal and locomotor, and tegumentary systems, plus obstetrics and pediatrics.

Following all this, one takes up the Technics of Medical Diagnosis and Therapy, under which we study physical diagnosis, laboratory methods and medical therapeutics, including pharmacotherapy and surgical therapeutics. Finally, to be sure, we must make a prognosis, which Dr. Hyman classifies as an art. The art must be based on well-remembered experience and reflection.

In following a plan of this sort, one must adhere to what may be called "the rules".

Let us assume that the inquirer has a patient with severe headaches of undetermined origin. He picks up the thinnest volume, it is really the fifth, which is 1., a general index; 2., an index of differential diagnosis and 3., an index of illustrations. On page 4,159 the word *headache* is found, followed by the figures 1,512 in heavy black type. In Volume II, on that page, he will find a list of differential diagnoses of headache with the "cause" and "diagnostic features," but it will be well if he turns back to page 1,510, or still further to page 1,506, where migraine introduces the subject and carries it through to "The General Management of Headache." The "types" are classified according to site, severity, time (such as Sunday or Monday, day or night etc.), headaches due to errors in hygiene, toxins, drugs, tobacco, alcohol, infections, neuroses and psychoses, otic, optic, osseous, and even the alleged head pains of the malingerer. If one will take the trouble to get a very careful history, and supplement this by laboratory examinations including x rays, blood counts, blood chemistry or whatever the situation seems to call for, he is likely to arrive at a good "working diagnosis". From there on, it may be a matter of "trial and error" insofar as drugs are concerned. Indications for operation are usually decided by more than one surgeon who will "consult" and will integrate all of the findings made by his colleagues. However, the author does not make the statement that when you have done all this, you have solved the individual problem. He has merely outlined a method of procedure by which a problem *may be solved!*

Preceding most of the "sections" of the book, the name of the associate editor appears. Many of these gentlemen have been in the armed services and have sent in their data without being able to revise, amend or otherwise edit it. Individual contributions and personalities have been submerged for the common good. Doubtless there are errors, but this reviewer has not found them, since it would take a lifetime to hunt them out in so massive a work. One may conclude by saying that here is a book for all time, for all men of medicine.

Tuberculosis

The Diagnosis and Treatment of Pulmonary Tuberculosis. By Moses J. Stone, M.D., assistant professor in medicine, Boston University School of Medicine; instructor in medicine, Tufts Medical School; and Paul Dufault, M.D., superintendent of the Rutland State Sanatorium, Rutland, Mass. With a foreword by Henry D. Chadwick, M.D. Illustrated with 93 engravings. Philadelphia: Lea & Febiger, 1946. Pp. 325. Price $3.50.

This little volume was known heretofore as "Hawes and Stone's Manual." The new co-author has written an entirely new text and has added some basic chapters on bacteriology and pathology. His object is to condense all the important information we have at hand into a nutshell, so that the student and nonspecialist shall gain a good working knowledge of pulmonary tuberculosis.

One eagerly scans the chapters on therapy to find something decisive, but save for surgical intervention which is limited to relatively few cases, the old order of rest, diet and pure air in a life out-of-doors is still maintained as it was forty years ago. Tuberculins, used to desensitize the body, have been disappointing and may be uncertain in action, even harmful.

Pneumothorax is recommended to put a lung at rest; it is even possible to do a "double" and still keep the patient alive. The contraindications are asthma and emphysema. It seems to be the least harmful of all surgical measures, and offers the advantage of making possible, to some extent, the reinflation of the lung after the healing is complete, which may be a matter of months or years.

Phrenicectomy, once popular in our western sanitaria, is seldom recommended along the eastern seaboard where the authors reside. It has been disappointing in its outcome, and sometimes results in gastric and other disturbing conditions not easily overcome.

Thoracoplasty is a permanent surgical procedure, that is, it is not "reversible". The rule is: "To transient trouble, temporary remedy; to irreparable damage, permanent measure". The authors remark that age and general bodily status are highly important in making a decision. Thoracoplasty is usually inadvisable in a patient who is past fifty years of age.

The tubercle bacillus is well protected by a fatty capsule which is resistant to all "remedies". If we can find an agent, fairly harmless to the general body economy, which will "split" the bacillus, we may come nearer to destroying it *in situ*. That is the problem for future biologists to solve; apparently not much is being done about it at this time, insofar as published reports are concerned. This is a useful epitome and deserves continued recognition.

MEDICAL RECORD

A National Review of Medicine and Surgery, Established 1843

FORMERLY KNOWN AS THE MEDICAL JOURNAL AND RECORD

PUBLISHED MONTHLY BY

THE MEDICAL JOURNAL AND RECORD PUB. CO., INC.

Office of Publication: 307 Main Street, Kutztown, Pennsylvania.
Editorial and Executive Offices: 215 Fourth Avenue, New York 3, N. Y.

GREGORY STRAGNELL, M.D. .....*Editor*
EDWARD C. TULKA .....*Business Manager*

Subscription Price: Under Domestic Postage, $4 Yearly; Under Foreign Postage, $4.75 Yearly; Single Copies, 40 cents.

Remittance should be made by New York Exchange, post office, or express money order, payable to The Medical Journal and Record Publishing Company, Inc., or by registered mail, as the publishers are not responsible for money sent by unregistered mail. Remittances from Foreign Countries should be made with International Money Orders.

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MARCH 1947

Medicolegal Notes

Extent of Hospital Lien

A charge for medical and surgical services which, if collected by the hospital, would be payable to the staff physician who rendered such services, is not a charge of the hospital for which it has a lien. Roosevelt Hospital vs. Loewy, New York Appellate Term, 185 Misc. 143, 55 N. Y. S. 2d 414. This was in an action by a hospital for medical and surgical charges where it was also shown that on becoming a member of the hospital's medical staff, the doctor agreed to make no charge to the hospital and to render his services gratis; except to his own patients brought to the hospital by him and with whom he dealt directly as to his own compensation. An ambulance patient who is taken to the hospital as the result of an accident has no freedom of choice, contract, or terms in respect to a physician who attends him at such a hospital.

The court did not find it necessary to determine whether the legislature might authorize staff physicians in charitable hospitals to charge reasonable compensation for services rendered to charitable patients who can afford to pay, or to ambulance patients injured through the negligence of third persons and have a lien for such services. All it held was, that section 189 of the New York Lien Law as written, does not provide a lien for a staff physician's services rendered gratis to the hospital, or a right to make or collect a charge for the reasonable value of same for such a physician.

The court was also of the opinion that the hospital's lien was not confined to "ward rates", mistakenly set forth in its bill to the defendant, but that the hospital was entitled to recover "cut rates" for treatment, care and maintenance. The judgment of the municipal court in favor of the hospital, was therefore modified by increasing its recovery to $410.28, with costs and affirmed as modified.

Damages

Where the damages in a personal injury case are prospective and difficult of exact ascertainment, the determination of such damages will not be disturbed on appeal by the Michigan Supreme Court if they are reasonably within the range of the testimony. Anderson vs. Kearly, 312 Mich. 566, 20 N.W. 2d 728.

Where a jury awarded grossly inadequate damages to three motorists injured in an automobile collision, warranting the conclusion that bias entered into their decision of other questions in the case, an absolutely new trial was held appropriate, rather than an award of damages of the least amount that an unprejudical jury could award or a new trial on the issue of damages alone. Wollangk vs. Jurgella, 248 Wis. 178, 21 N.W. 2d 272.

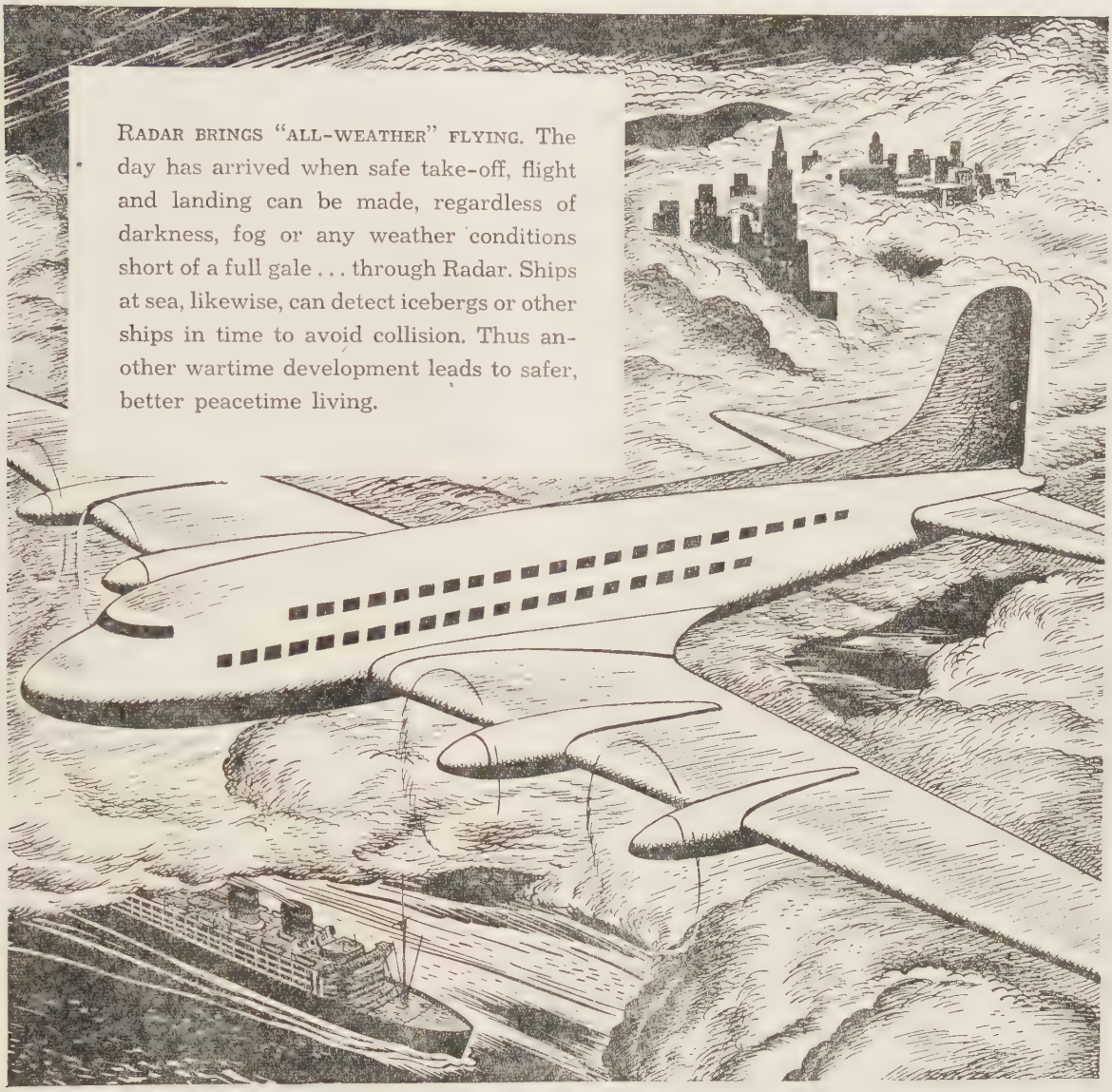
Hospital Records in Evidence

Are the records of a public hospital, duly identified, admissible as evidence to show the condition of the patient as bearing on the amount of pain and suffering? The courts are divided in opinion on the subject. This conflict of opinion extends to the reason for admission or exclusion of the evidence. Gearhart vs. Des Moines Ry. Co., Iowa Supreme Court, 21 N. W. 2d 569. "It is apparent", the court said, "that hospital records cannot be governed by the same rules or principles as applied to books of account nor admitted under our statute relating to such entries". The record here was the day-to-day record of the patient's condition while in the hospital—the regular charts of the patient, kept and used by the hospital in her care and treatment. The records were therefore admitted.

Damages

An award of $13,500 to a crane operator on road work, injured when part of the crane came into contact with uninsulated wires carrying sixty-nine hundred volts, was given for medical bills, loss of earnings, past and future, pain and suffering and permanent disabilities. It could not be called excessive in order to justify setting aside the verdict. Chatfield vs. New York State Gas and Electric Corp., Supreme Court, Onondega County, 57 N. Y. S. 2d 406; affirmed by Appellate Division, 57 N. Y. S. 2d 455.

Toward a Better World



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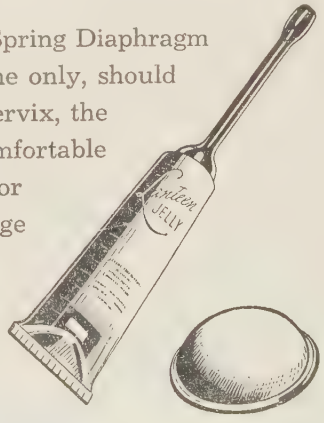

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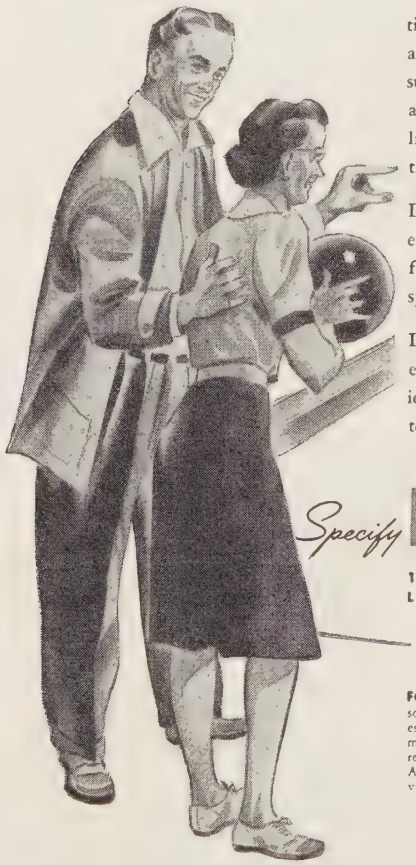

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According to the figures which were released by the United States Public Health Service, fewer deaths occurred in the United States in 1945, than in either of the two preceding war years. A total of 1,401,719 deaths were reported in the United States in 1945, as compared with 1,411,338 in 1944, 1,459,544 in 1943 and 1,385,187 in 1942. In the first ten months of 1946, there were an estimated 1,162,000 deaths in the United States, as compared with 1,144,273 in the first ten months of 1945. All figures are for the continental United States and exclude deaths among the armed forces overseas.

Deaths from the major infectious diseases declined to new lows in 1945. The year set a record low for pneumonia and influenza. The total of 68,386 deaths from these respiratory causes was 8.2 percent, less than the previous minimum of 74,532 deaths in 1942, and 16.4 percent less than the number reported for 1944. Tuberculosis continued its decline in 1945. There were 52,916 deaths from this cause in the United States in 1945, 3.3 percent less than the number in 1944 and fewer than in any previous year. Heart disease, cancer, and intracranial lesions strengthened their positions at the head of the list of leading causes of death. Heart disease deaths accounted for 30.3 percent of the reported deaths in 1945, as compared with 29.6 in 1944. Cancer, the second leading cause of death, claimed 12.7 per-

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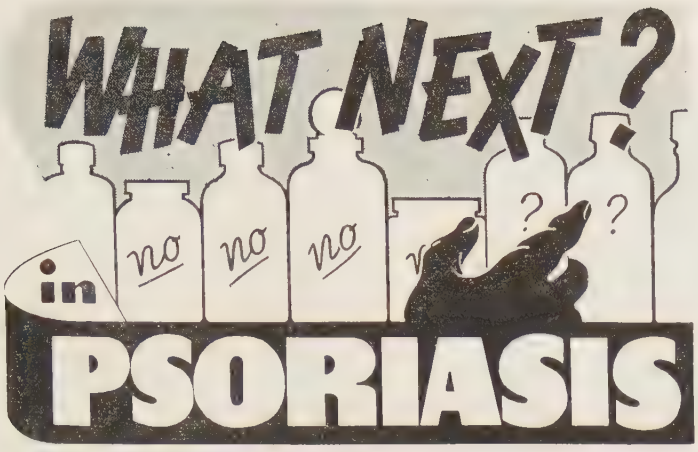

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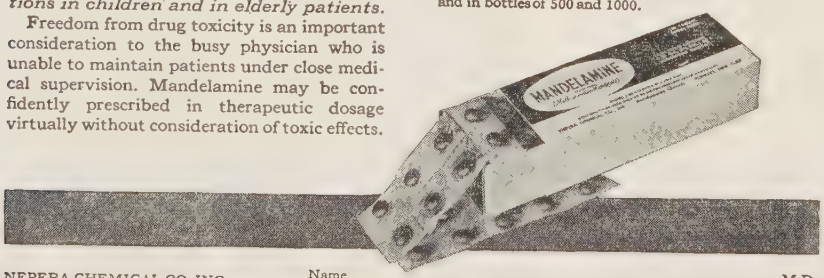

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cent of the total, as compared with 12.1 in 1944. The third leading cause of death, intracranial lesions of vascular origin, was responsible for 9.2 percent of all deaths in 1945, as compared with 8.8 percent in 1944.

The ten causes of death which were found in the lead in 1945, are those which headed the list in the prewar period 1939-1941. With the exception of motor vehicle accidents, the ten causes of death, rank in 1945, in the same order of importance as in the period of 1939-1941. Due chiefly to wartime restrictions on driving, motor vehicle accidents dropped from eighth place as a cause of death in 1939-1941, to tenth place in 1942.

A Quarter-Century of Insulin

According to the *Statistical Bulletin*, October 1946, of the Metropolitan Life Insurance Company, this year marks the twenty-fifth anniversary of the discovery of insulin by the late Sir Frederick Banting and Dr. Charles H. Best, Toronto, Canada. The discovery was a milestone in the history of medicine, not only because it revolutionized the clinical treatment of diabetes, but also because it provided the first potent weapon against a major chronic disease of middle and later life. Insulin has greatly extended the length of life of diabetics, and has made it possible for them to live relatively healthy and active lives.

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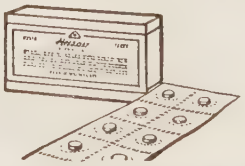

mortality of diabetic patients. Analysis of the mortality experience of the George F. Baker Clinic in Boston shows a reduction of more than 95 percent at ages under forty; a reduction of two-thirds among middle-aged diabetics and of about half for older diabetics. A major factor in this decline in mortality has been the sharp reduction in fatalities from diabetic comas. Similarly, the death rate from infections and gangrene has decreased markedly.

In the twenty-five years since the discovery of insulin, the number of diabetics in our population has greatly increased. This is a natural result, since the substance and the newer treatment prolong the life of the diabetic without effecting an actual cure. There are other factors working in the same direction. One is the aging of our population —that is, the increasing proportion of those age groups which are most subject to diabetes. Another factor, which affects the recorded prevalence, is the development of relatively inexpensive tests for the disease and the greatly increased use of these tests; partly through their more routine use in physicians' offices and hospitals, but also through the growing popularity of periodic and industrial examinations of seemingly healthy persons. In the same way, the greatly increased number of medical examinations incidental to the rapid growth of life insurance has brought to light many unsuspected cases. It is particularly noteworthy that in the quarter century under discussion, life insurance among women has increased tremendously.

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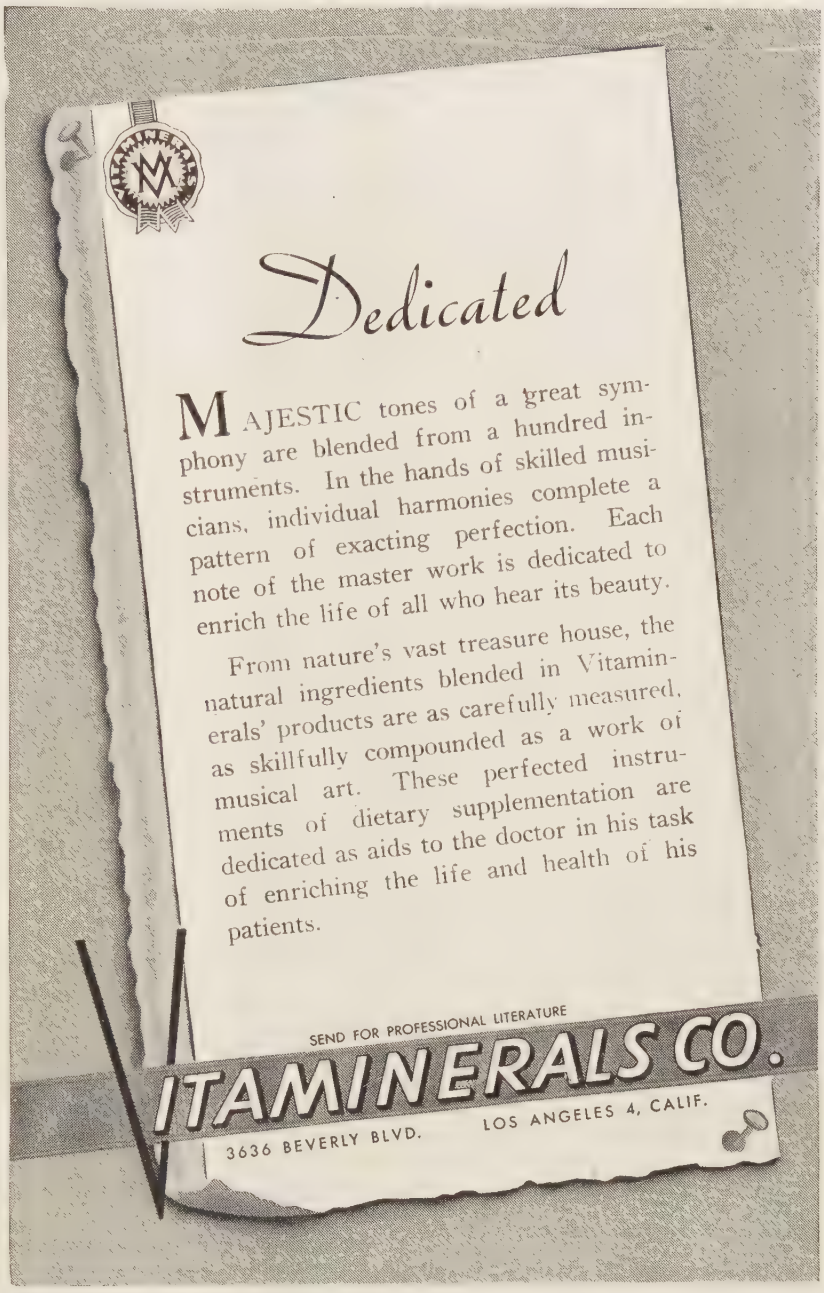
The discovery of insulin itself, also has led to an increasing frequency of the diagnosis of the disease by arousing both physicians and the general public to an awareness of the disease. As a result of these and other factors, the number of known diabetics in this country has increased at a far more rapid rate than the total population of the country. In fact, it is estimated that the number of known diabetics has more than doubled in the last twenty-five years. The increase has been particularly large in middle and old age.

In view of this great increase in the number of diabetics, it is only to be expected that the long-term trend of the death rate from diabetes in the general population would be upward, and in fact this is the case, even when corrections are made for the aging of the population. Thus, among policyholders of the Metropolitan Life Insurance Company, the age-corrected death rate in the five year period of 1941 to 1945 was 11 percent above the rate for the preinsulin years of 1920 to 1922. So marked, however, has been the improvement in the mortality among diabetics, that at all ages up to fifty-five the death rates have actually fallen. The death rates among the insured white males, at ages under thirty-five in 1941-1945, were about two-thirds less than the rates for 1920-1922, and the reduction among females at these ages was more than 50 percent. Only at the ages past fifty-five are the rates for 1941-1945 above those for the preinsulin period.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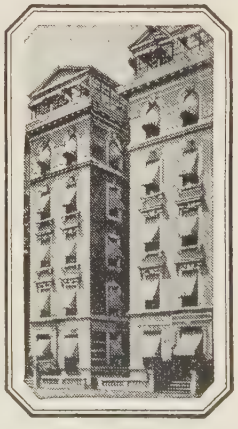

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The Future of Surgery

Predictions concerning the future of surgery, and a review of the recent achievements in this field are contained in a "blue print" for tomorrow's medicine, a New York University College of Medicine publication. Written frankly for the layman, the brochure is one of a series on future developments in the medical sciences and is being published in conjunction with the $15,575,000 New York University-Bellevue Medical Center campaign. Completion of the brochure took two years of intensive research by the New York University College of Medicine faculty members. In a section that reviews some of the recent outstanding advances in surgery of psychiatric patients, the brochure says that mental diseases can sometimes be treated by the surgeon's knife. Involved in this procedure, is a new technique of cutting the nerves of the brain's frontal lobe, a process which tends to calm otherwise unmanageable patients. Still another surgical process now in practice, this one in the field of anesthetics for normal persons, is nerve blockage, a system of stopping pain by shutting off the sensations of the pain conducting fibers. This procedure is not only used for relief, but is recognized as a cure for many painful disorders. From these innovations, arises the possibility that surgeons may eventually find cures for formerly unexplained illnesses. The field of tumors and inherited deformities of the brain gives promise of results after fur ther study.

The New York University College of Medicine blueprint says that psychiatry is only one field for the future development of surgery. With the augmented research facilities that will be provided by the proposed New York University-Bellevue Medical Center, surgeons hope to obtain relief for such mysterious sicknesses as phantom pains after leg and arm operations, the white, hot, burning pains of neuralgia, the constrictions of blood vessels that stop the flow of blood to the heart and the psychoneurotic feeling of insecurity felt by a person with a disordered, autonomic nervous system. This is the nervous system that is not controlled by will. It regulates, for instance, the rate of the heart beat. Other unsolved problems which must be dealt with are infection and emboli. New approaches to infection, based upon the patient's ability to fight off bacteria, are being worked out. The New York University-Bellevue Medical Center will have researchists devoting all their time to developing tech niques for removing the infection hazard. Emboli, clots of blood that flow in the blood stream and lodge in the lungs or other large vessels at unpredictable times, offer another challenge to future study by surgeons.

Patients can now undergo prolonged operations, that take as long as ten hours, because of discoveries in the field of anesthesia which were made by surgeons. Aged persons, whose slow-mending bones have been broken, are able to carry on easily and comfortably because of surgeons who have developed intricate ways of setting the bones together.

New York University surgeons state that, this fight to make further progress in the methods used to cure disease, will go on in the future. A new idea, however, will be added. Surgeons will ask themselves, "How can disease be eliminated?" In other words, the surgeon whose life is devoted to the repair of the damage done by disease, will attempt to do away with disease, thus eliminating the necessity for his surgical skill. For instance, surgical removal is the best treatment of cancer, but for many years surgeons have been trying to find a better cure, based on preventive medicine. It is predicted that not too far in the future, these efforts may be successful.

Rickettsial Disease Therapy

At the recent meeting of the American Pharmaceutical Manufacturers' Association, Dr. Andrew Yeomans, in a paper entitled, "Progress in rickettsial disease", stated that the recent advances in the treatment of rickettsial diseases have been along three main lines; rational supportive treatment based on pathophysiological studies, the use of a specific hyperimmune serum and chemotherapy. Clinical studies have shown the importance of the intravenous use of plasma or albumin solutions in overcoming the serious effects of severe hypotension or edema. The importance of renal failure, the necessity for adequate hydration, and the need for and beneficial effects of a high protein diet have been stressed. The use of specific hyperimmune sera has shown encouraging results only when given early in the clinical course of two rickettsial diseases, spotted fever and louse borne typhus fever. The most encouraging advances in specific treatment have been in the field of chemotherapy.

From the numerous chemical compounds thus far tested in experimental rickettsial infections, paraaminobenzoic acid emerges as the chemotherapeutic agent of greatest beneficial effect. Not only has it been demonstrated that this drug will protect a variety of laboratory animals against otherwise lethal infections with rickettsias of louse borne typhus, murine typhus, Rocky Mountain spotted fever, and tsutsugamushi disease, but there is now considerable clinical experience available to indicate the beneficial effects of this compound on the course of louse borne typhus fever, Rocky Mountain spotted fever and tsutsugamushi disease in humans.

The experience gained in the treatment of ninety-five cases of louse borne typhus fever by members of the United States of America Typhus Commission during and immediately following World War II, is the basis for discussion of the use of this compound in rickettsial disease therapy. Consideration is given to the method of administration of paraaminobenzoic acid, its effect on the clinical course of typhus fever, the precautions which must be heeded in its use and the conditions which are at present considered contraindications for therapy with this drug.

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Personnel Need of Veterans Administration

Psychiatrists, clinical psychologists and psychiatric and medical social workers are needed by the Veterans Administration to serve in Veterans Administration mental hygiene clinics now being operated in twenty-three cities throughout the United States. Twenty or more additional clinics in other cities are to be opened when personnel to staff them is available.

Minimum qualifications for psychiatrists, require certification as a diplomate of the American Board of Psychiatry and Neurology, or eligibility for the examination. These positions are established under the Veterans Administration department of medicine and surgery.

Applicants for positions as clinical psychologists and psychiatric and medical social workers must have at least two years of progressively responsible experience in the application or teaching of psychological principles and techniques and proven ability to evaluate personality problems. In addition, all candidates must have completed ten required courses in the field of psychology. If an applicant has completed all requirements for a doctor's degree in psychology, he will be accepted as meeting this education requirement.

Social workers must have one year of training in an approved school of social work, which is the minimum educational requirement for these positions. This training must have included supervised field work and courses in psychiatric or medical information plus the required experience, which is one year in a health or welfare agency of acceptable standards. Additional qualifying experience is required for higher grade positions. Applicants may substitute one year of training (in addition to that used to satisfy the basic requirement) completed in an approved school of social work for one year of experience.

Case supervisors, in addition to the minimum educational requirements for social workers, must have three years of experience, two years of which must have been spent in rendering psychiatric or medical social work services in a hospital or clinic of acceptable standards, and one year must have been in a case supervisory capacity.

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Hydrolysin, a new product, has recently been announced by William H. Rorer, Inc., Philadelphia, Pa., pharmaceutical manufacturers. In announcing the new product, the manufacturers state that hydrolysin is a valuable therapeutic aid in protein depletion, as well as a useful dietary supplement in many conditions requiring high nitrogen intake. It is prepared in the form of golden-brown granules, and is palatable whether given alone, or in foods or liquids. Hydrolysin contains protein hydrolysate, 60 percent, providing ample amounts of all the essential amino acids; carbohydrate, 30 percent, and starch, 10 percent; together with therapeutic amounts of all the known and unknown B Complex factors. It is supplied in bottles containing 250 Gms.

Gynograph

A radically new, portable dual-purpose instrument, to be employed in the diagnosis and treatment of female sterility, will soon be available. Patented as the Gynograph, after seven years of untiring research and produced by the Goodman-Kleiner Co., Inc., it has been successfully utilized by Dr. Abner I. Weisman, New York, N. Y.

The gynograph makes use of a simple and inexpensive source of carbon dioxide gas for insufflation of the fallopian tubes, both diagnostically and therapeutically, and it may simultaneously be used in hysterosalpingography by a simple manipulation. The apparatus has the unique feature of being able to safely instill either CO_2 or a radio-opaque substance into the female organs, separately or simultaneously; and finally perform a combined pneumoviscerograph of the abdominal organs, all under complete and constant manometric observation. This observation is possible even in the darkness of a fluoroscopy examination or during the taking of an x ray.

The gynograph also incorporates a newly designed, self-retaining canula which possesses many unique features and makes for an easier and less painful insertion and retention in the uterus. The canula is attached to the apparatus directly, thus releasing the operator from holding the canula and tenaculum, as is the practice in most other techniques.

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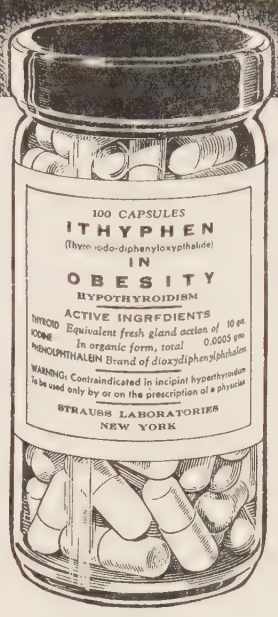

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Care of Cancer Patients

Establishment was recently made of the first facilities in New York, for the care of cancer patients in the advanced stages of the disease. Julius Jay Perlmutter, president of the foundation, said that the facilities, the establishment of which marks the first step in the National Cancer Foundation's program of making available adequate hospital care for the nation's thousands of advanced cancer patients, will consist of a unit of one hundred and twenty-five beds at Manhattan General Hospital, New York.

The beds will be maintained by the National Cancer Foundation, and the unit will be supervised by physicians of the National Medical and Scientific Council of the foundation. The council, Mr. Perlmutter added, includes some of the foremost cancer specialists in the country.

Mr. Perlmutter emphasized that beds in the cancer unit will be available to advanced cancer patients, regardless of their economic status. "Patients who can afford to do so, will pay," he said; "those who cannot pay, will be cared for by the National Cancer Foundation. The only requirement for admission will be that there are no other hospital facilities available to care for the person requesting admission.

Application for admission can be made through the patient's physician, through accredited social service agencies, or by direct application to the medical social service division of the National Cancer Foundation, 85 Franklin Street, New York, N. Y.

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WHAT do you want to save up a lot of money for? You'll never need the stuff.

Why, just think of all the wonderful, wonderful things you can do *without* money. Things like—well, things like—

On second thought, you'd better keep on saving, chum. Otherwise you're licked.

For instance, how are you ever going to build

that Little Dream House, without a trunk full of moolah? You think the carpenters are going to work free? Or the plumbers? Or the architects? Not those lads. They've been around. They're no dopes.

And how are you going to send that kid of yours to college, without the folding stuff?

Maybe you think he can work his way through by playing the flute.

If so, you're crazy. (Only three students have ever worked their way through college by playing the flute. And they had to stop eating for four years.)

And how are you going to do that world-traveling you've always wanted to do? Maybe you think you can stoke your way across, or scrub decks. Well, that's no good. I've tried it. It interferes with shipboard romances.

So—all seriousness aside—you'd better keep on saving, pal.

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Transmission of Infantile Paralysis

According to the annual report of the National Foundation for Infantile Paralysis, evidence has continued to mount indicating that infantile paralysis is transmitted most often by intimate contact between a susceptible person and someone harboring the virus. This someone may or may not show clinical symptoms of the disease. It has been estimated that, for every diagnosed case of infantile paralysis, there may be up to one hundred persons who have the infection in unrecognized form, and from whom the virus could be recovered in laboratory tests. There is as yet no way of telling in advance who among a patient's daily contacts may be carriers of the virus. Scientists now know that infantile paralysis is a much more widespread disease than was suspected only a few years ago. The vast majority who get the disease do not have it in recognizable form. There is no paralysis and most of the time the people themselves are not aware they have it. Yet these apparently healthy individuals may be sources of infection. A large number of us undoubtedly have been exposed to the virus many times in the past and developed, probably without realizing it, complete or partial immunity. During epidemic seasons people with colds, upset stomachs, headaches and fever—and no paralysis—are suspect. The chances are not more than two in a thousand that they have the disease in paralytic form, but they can be harboring the virus.

Although it has been established beyond any doubt that the common house fly can carry the virus, no one has demonstrated that the fly is commonly involved in the transmission of the disease to human beings. Even if we got rid of flies, as may be possible with such new insecticides as DDT, there is no evidence so far that it would stop the spread of polio. Results of DDT sprayings up to now have proved ineffective, possibly because the virus was widespread by the time the spraying took place, because flies breed so rapidly they soon replace themselves, or maybe because flies are relatively unimportant in transmission of the disease anyway. The polio virus never has been found to exist in nature—in birds, fish, animals or insects other than the fly. With regard to the fly, there is no proof that the virus can multiply within its body.

The virus enters the body either through the nose or mouth, and becomes established some place in the alimentary canal. If it stays within the alimentary canal, no damage is done, but recent studies indicate that it may invade the central nervous system by passing through the mucous membranes of the alimentary canal at any point between mouth or throat and the lower part of the digestive tube. This is a departure from earlier thinking, in which the nasal passage and olfactory nerve were considered the chief portal of entry to the nervous system.

Evidence now indicates the virus commonly invades the nervous system through the mucous membranes of the back of the mouth and throat. This stresses anew the importance of previous findings that in persons who get polio shortly after they have had their tonsils and adenoids removed, there is a greater likelihood of development of the bulbar form of the disease. This form affects the higher nerve centers that control vital processes such as breathing and swallowing. It is one of the most serious types of the disease. It is therefore advisable to avoid such operations, where possible, preceding or during the summer and early fall, the usual epidemic season.

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